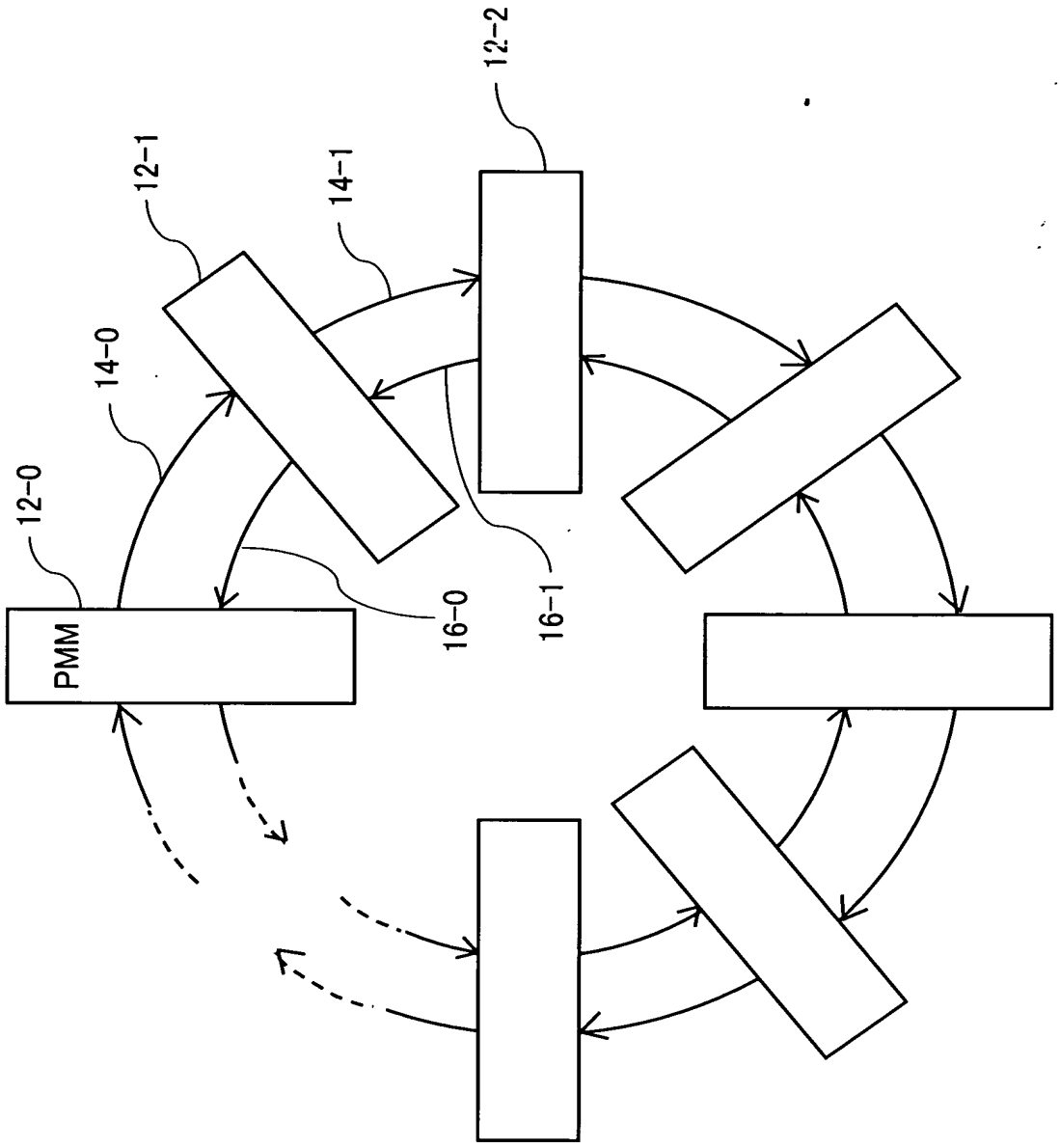


FIG.1

FIG.2

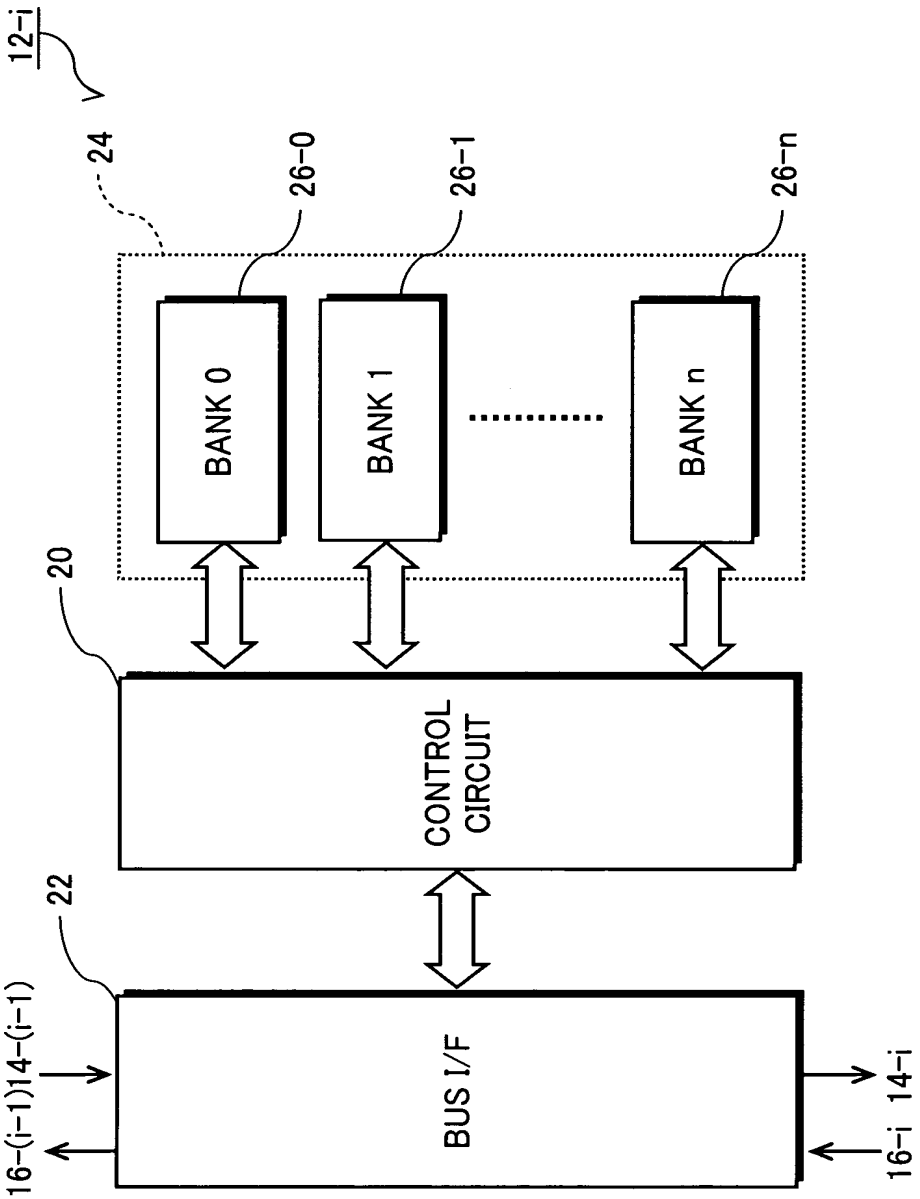

12-i
24
26-0
26-1
26-n
BANK 0
BANK 1
BANK n
20
CONTROL CIRCUIT
22
BUS I/F
16-(i-1)
14-(i-1)
16-i
14-i

FIG.3

	GENDER	AGE	HEIGHT(cm)	WEIGHT(kg)
0	FEMALE	18	168	55
1	MALE	21	172	64
2	FEMALE	24	159	48
3	FEMALE	16	172	48
4	MALE	28	181	78
5	FEMALE	20	166	55
6	FEMALE	16	168	52
7	MALE	33	174	65
8	MALE	24	177	64
9	FEMALE	18	170	55

FIG.4

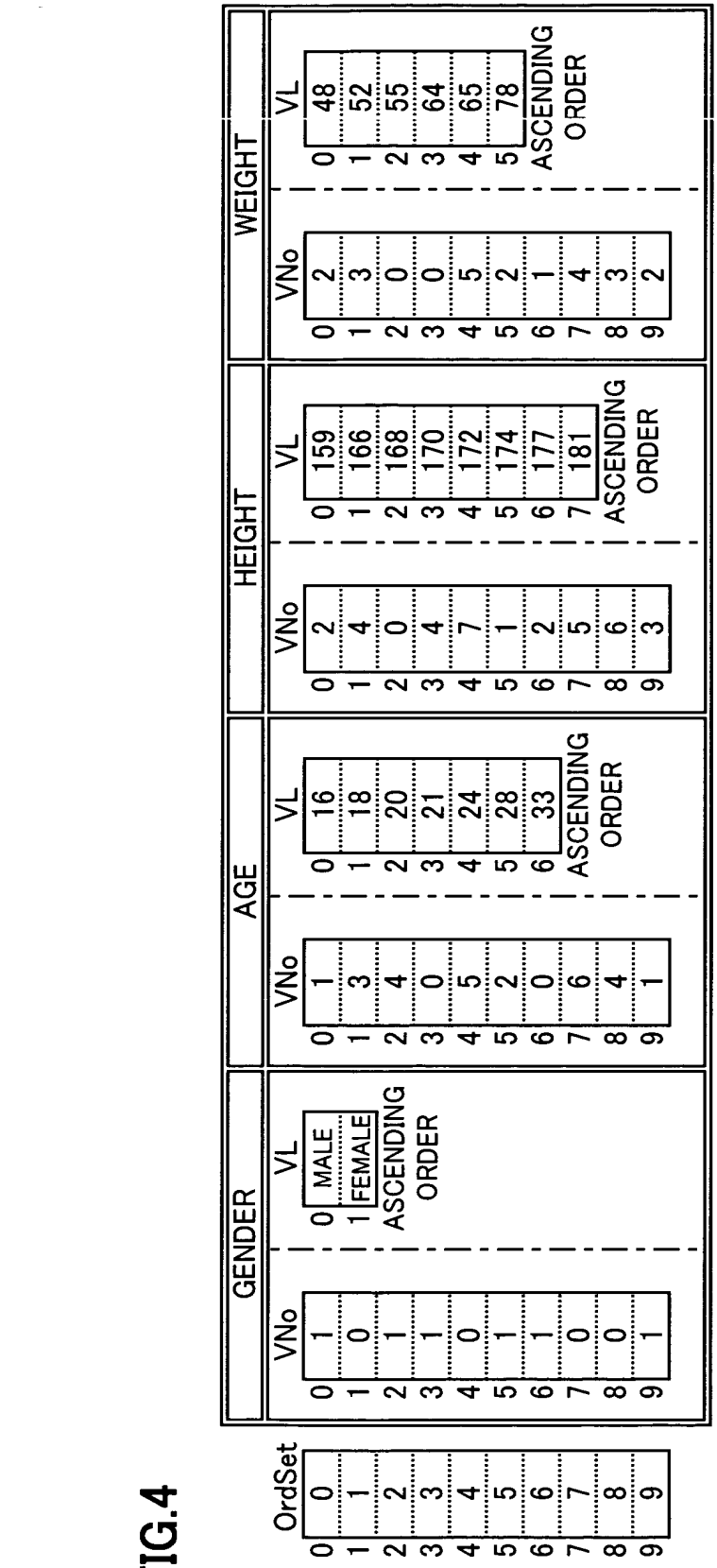

OrdSet
GENDER
AGE
HEIGHT
WEIGHT
VNo
VL
MALE
FEMALE
ASCENDING ORDER

FIG.5

OFFSET= 0

PMM-0

	GENDER	AGE	HEIGHT(cm)	WEIGHT(kg)
0	FEMALE	18	168	55
1	MALE	21	172	64
2	FEMALE	24	159	48

OFFSET= 3

PMM-1

	GENDER	AGE	HEIGHT(cm)	WEIGHT(kg)
0	FEMALE	16	172	48
1	MALE	28	181	78

OFFSET= 5

PMM-2

	GENDER	AGE	HEIGHT(cm)	WEIGHT(kg)
0	FEMALE	20	166	55
1	FEMALE	16	168	52
2	MALE	33	174	65

OFFSET= 8

PMM-3

	GENDER	AGE	HEIGHT(cm)	WEIGHT(kg)
0	MALE	24	177	64
1	FEMALE	18	170	55

FIG.6

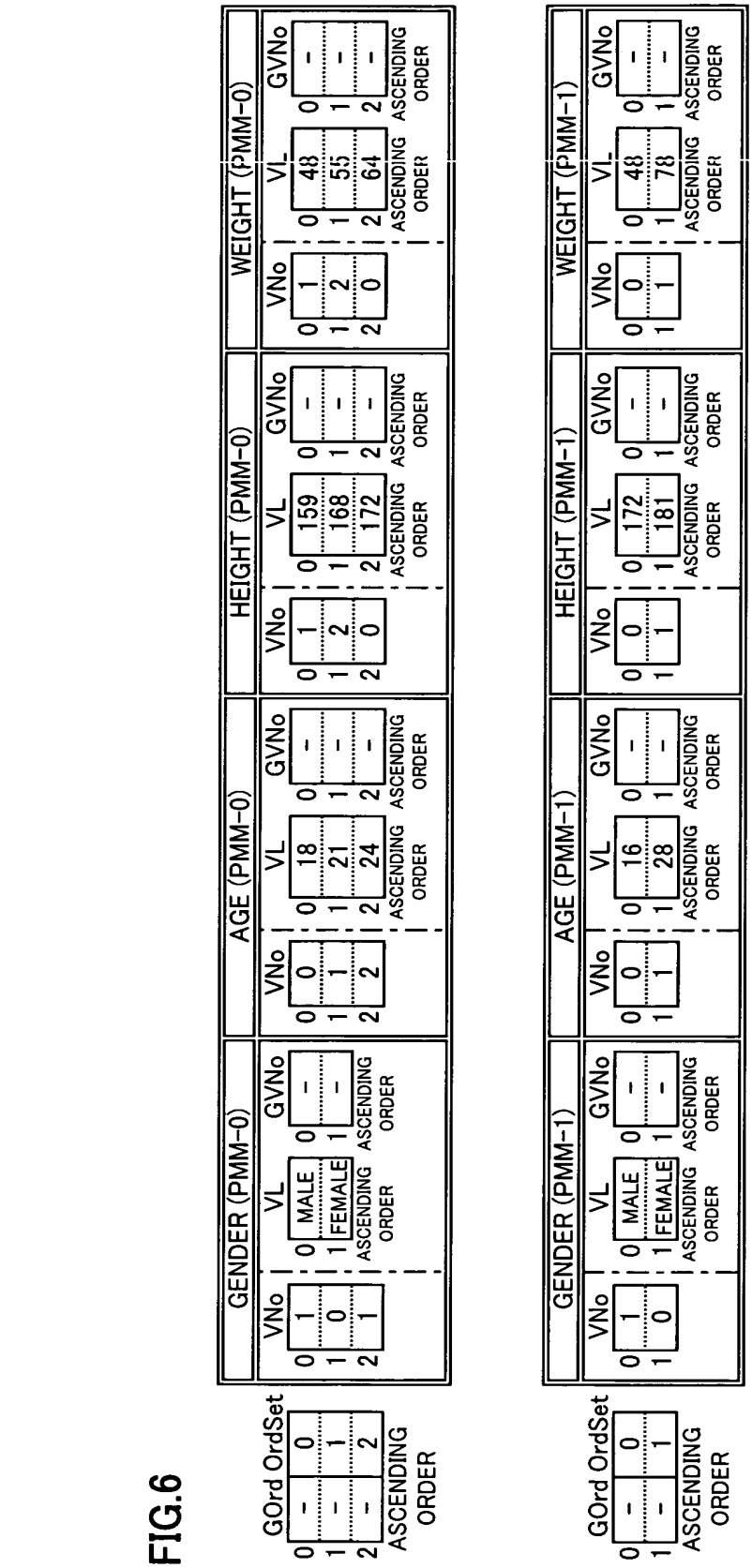

GENDER (PMM-0)
AGE (PMM-0)
HEIGHT (PMM-0)
WEIGHT (PMM-0)
VNo
VL
GVNo
MALE
FEMALE
ASCENDING ORDER
GOrd OrdSet
GENDER (PMM-1)
AGE (PMM-1)
HEIGHT (PMM-1)
WEIGHT (PMM-1)

FIG.7

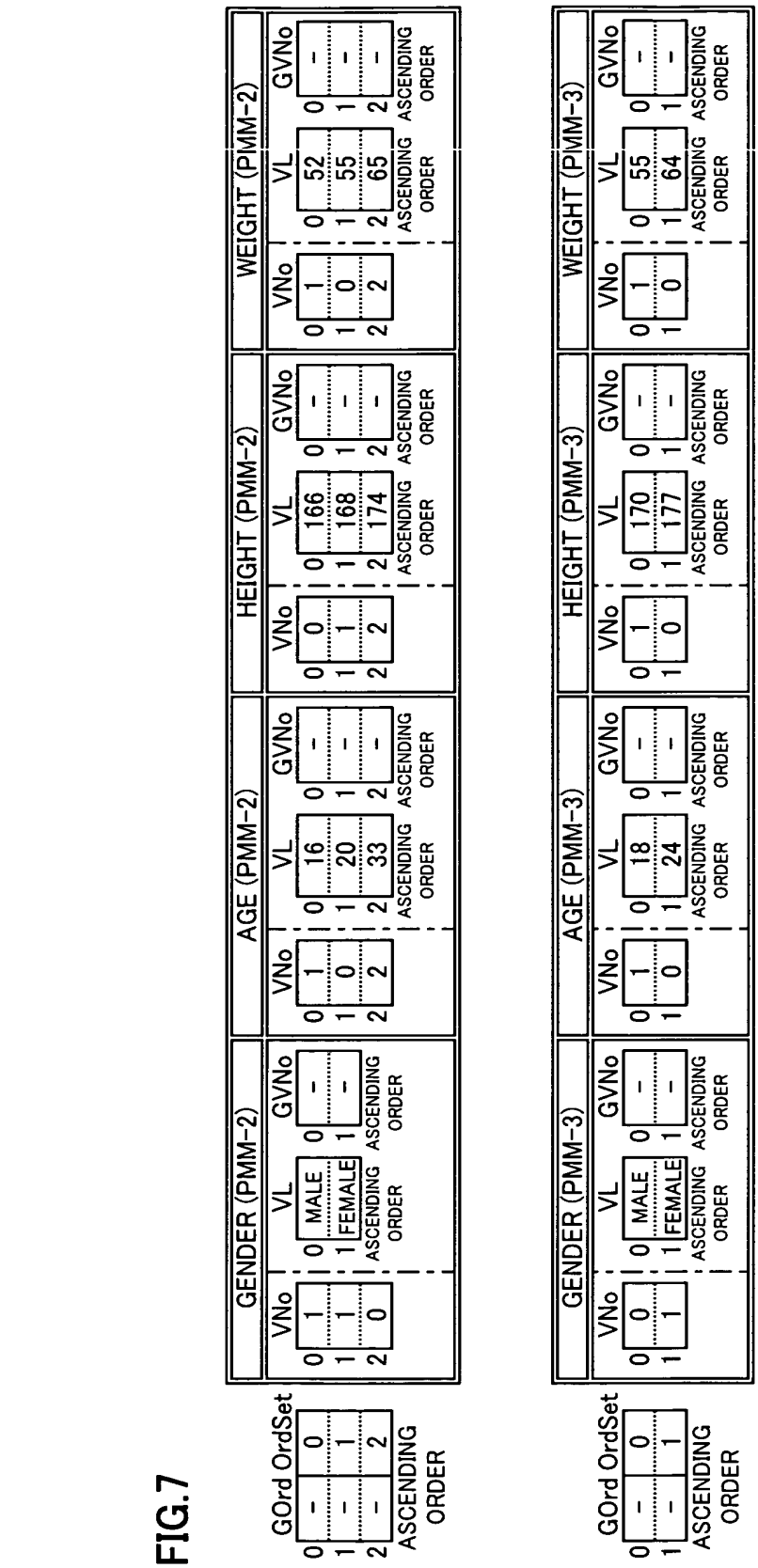

GENDER (PMM-2)
AGE (PMM-2)
HEIGHT (PMM-2)
WEIGHT (PMM-2)
VNo
VL
GVNo
MALE
FEMALE
ASCENDING ORDER
GOrd OrdSet
GENDER (PMM-3)
AGE (PMM-3)
HEIGHT (PMM-3)
WEIGHT (PMM-3)

FIG.8

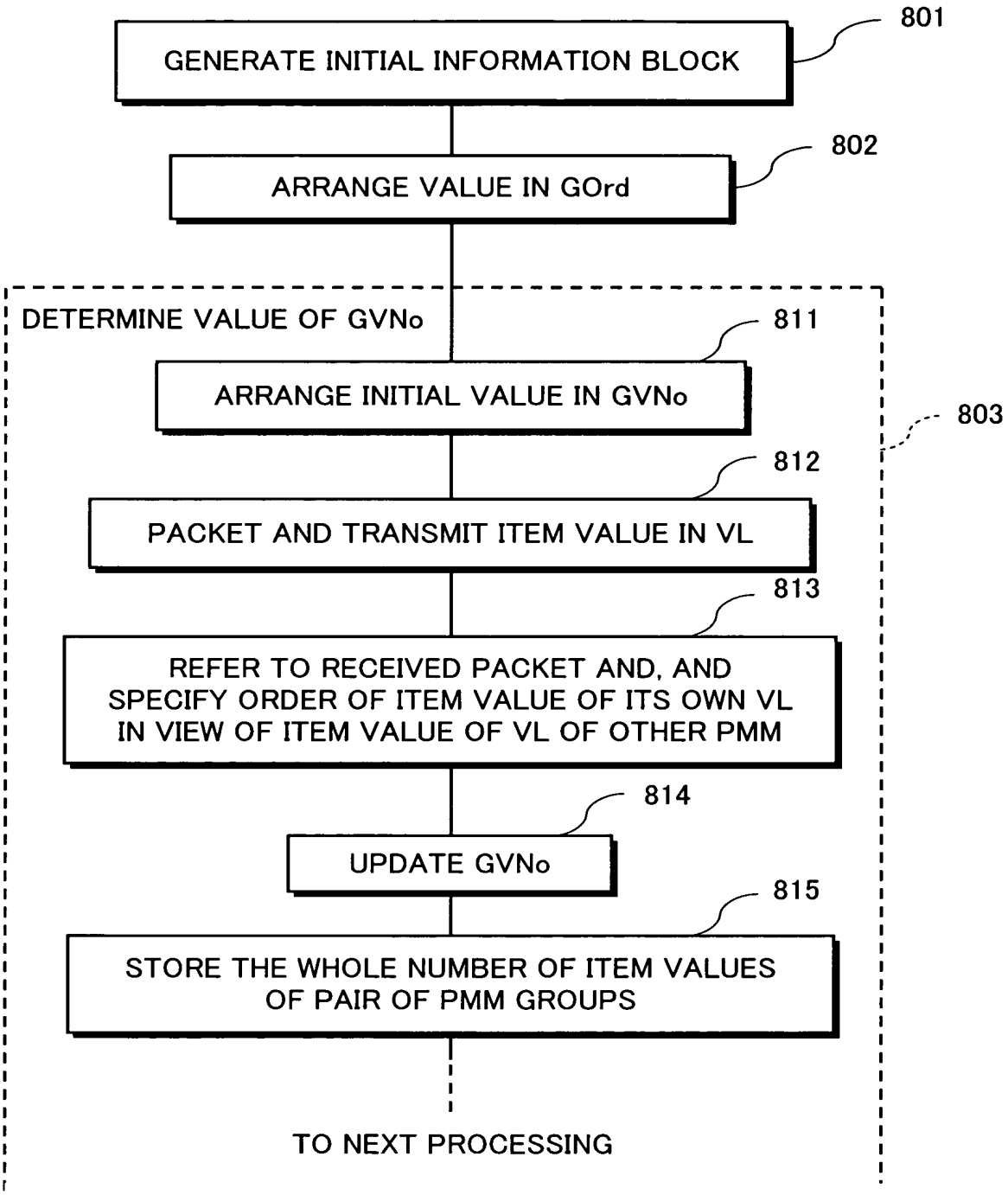

801
GENERATE INITIAL INFORMATION BLOCK
802
ARRANGE VALUE IN GOrd
DETERMINE VALUE OF GVNo
811
ARRANGE INITIAL VALUE IN GVNo
803
812
PACKET AND TRANSMIT ITEM VALUE IN VL
813
REFER TO RECEIVED PACKET AND, AND SPECIFY ORDER OF ITEM VALUE OF ITS OWN VL IN VIEW OF ITEM VALUE OF VL OF OTHER PMM
814
UPDATE GVNo
815
STORE THE WHOLE NUMBER OF ITEM VALUES OF PAIR OF PMM GROUPS
TO NEXT PROCESSING

FIG.9

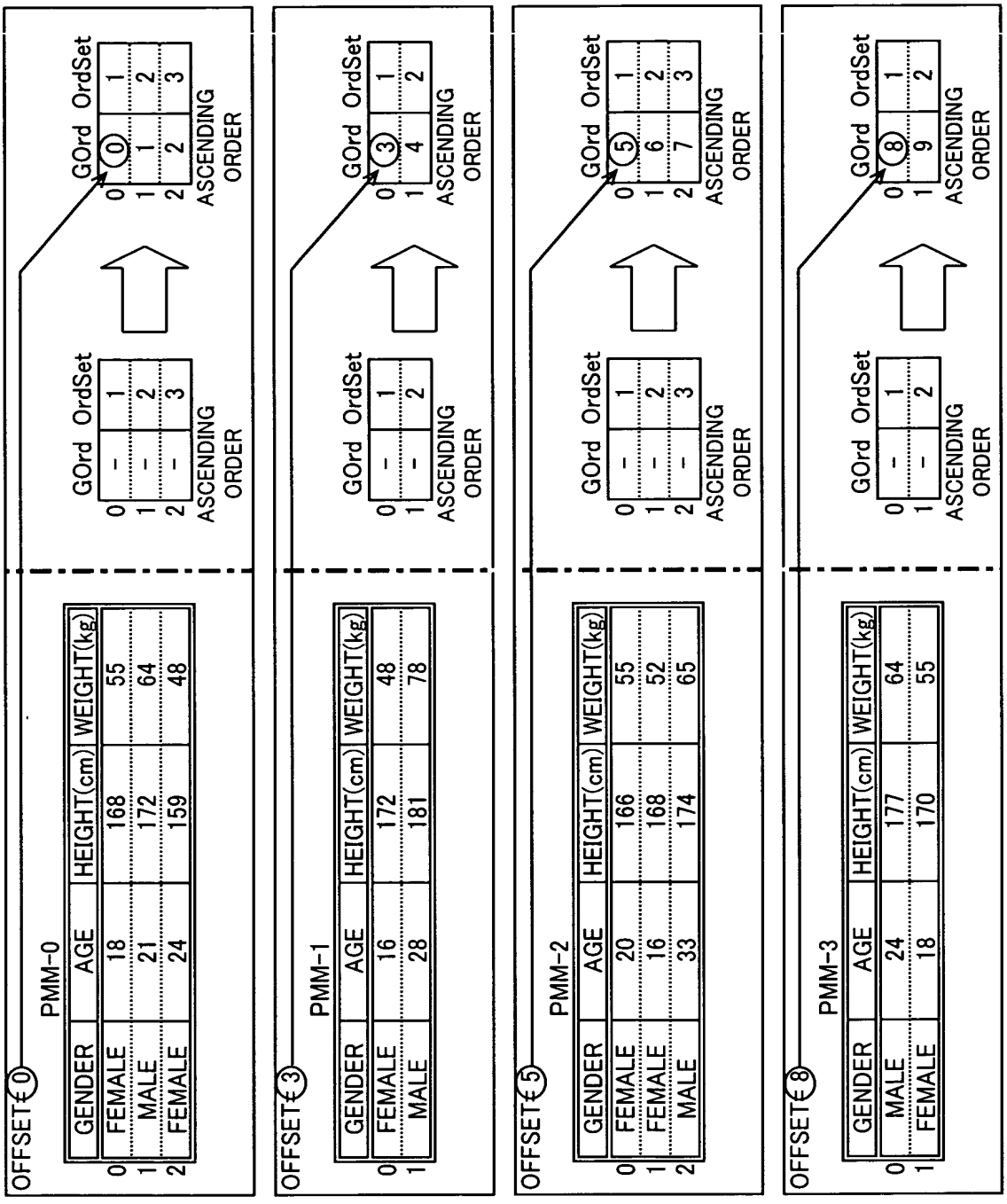

OFFSET 0
PMM-0
GENDER AGE HEIGHT(cm) WEIGHT(kg)
0 FEMALE 18 168 55
1 MALE 21 172 64
2 FEMALE 24 159 48
GOrd OrdSet
0 - 1
1 - 2
2 - 3
ASCENDING ORDER
GOrd OrdSet
0 0 1
1 1 2
2 2 3
ASCENDING ORDER
OFFSET 3
PMM-1
GENDER AGE HEIGHT(cm) WEIGHT(kg)
0 FEMALE 16 172 48
1 MALE 28 181 78
GOrd OrdSet
0 - 1
1 - 2
ASCENDING ORDER
GOrd OrdSet
0 3 1
1 4 2
ASCENDING ORDER
OFFSET 5
PMM-2
GENDER AGE HEIGHT(cm) WEIGHT(kg)
0 FEMALE 20 166 55
1 FEMALE 16 168 52
2 MALE 33 174 65
GOrd OrdSet
0 - 1
1 - 2
2 - 3
ASCENDING ORDER
GOrd OrdSet
0 5 1
1 6 2
2 7 3
ASCENDING ORDER
OFFSET 8
PMM-3
GENDER AGE HEIGHT(cm) WEIGHT(kg)
0 MALE 24 177 64
1 FEMALE 18 170 55
GOrd OrdSet
0 - 1
1 - 2
ASCENDING ORDER
GOrd OrdSet
0 8 1
1 9 2
ASCENDING ORDER

FIG.10

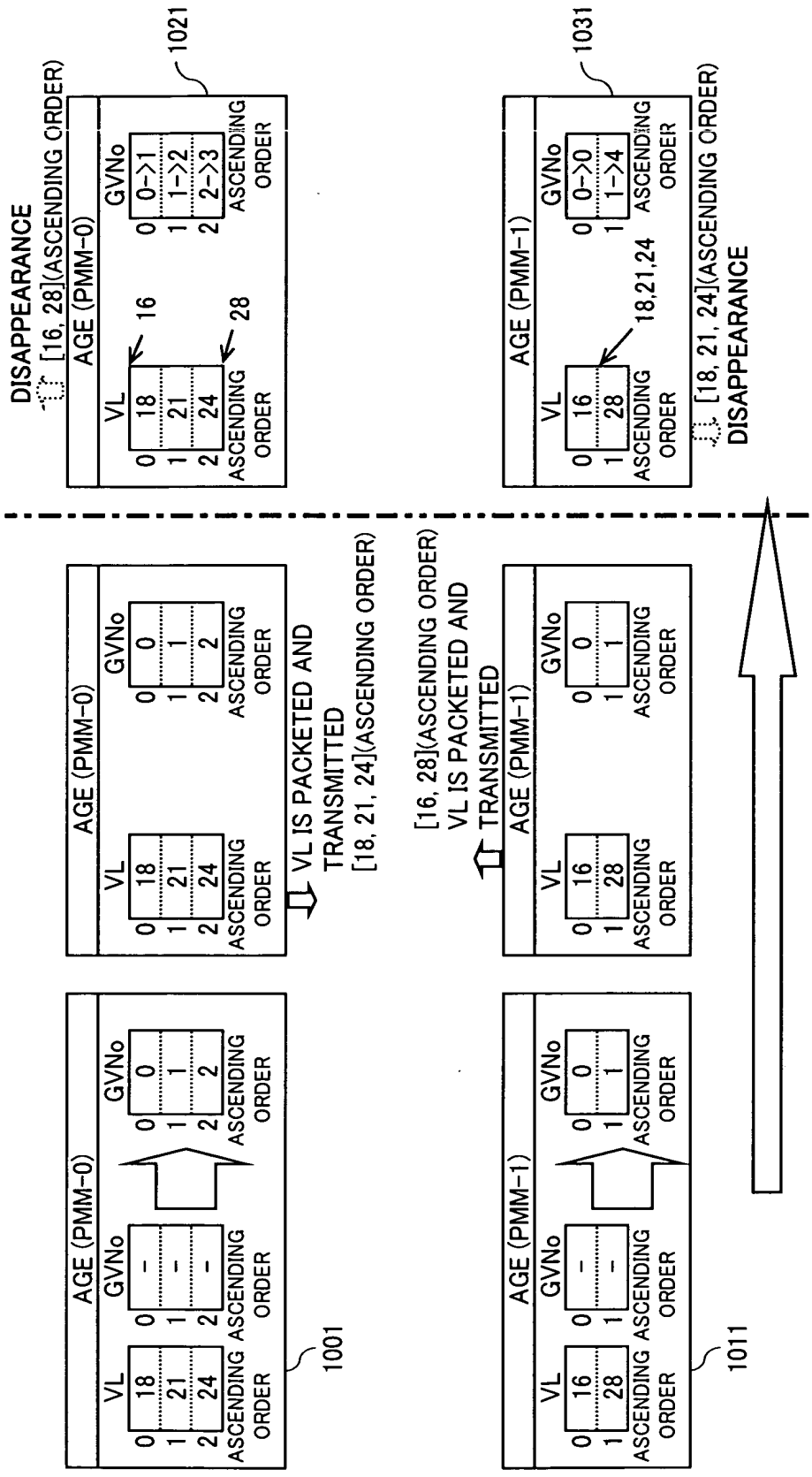

AGE (PMM-0)
VL
GVNo
ASCENDING ORDER
ASCENDING ORDER
1001
AGE (PMM-1)
1011
VL IS PACKETED AND TRANSMITTED
[18, 21, 24](ASCENDING ORDER)
[16, 28](ASCENDING ORDER)
VL IS PACKETED AND TRANSMITTED
DISAPPEARANCE
[16, 28](ASCENDING ORDER)
16
28
1021
0->1
1->2
2->3
18,21,24
1031
0->0
1->4
DISAPPEARANCE
[18, 21, 24](ASCENDING ORDER)

FIG.11

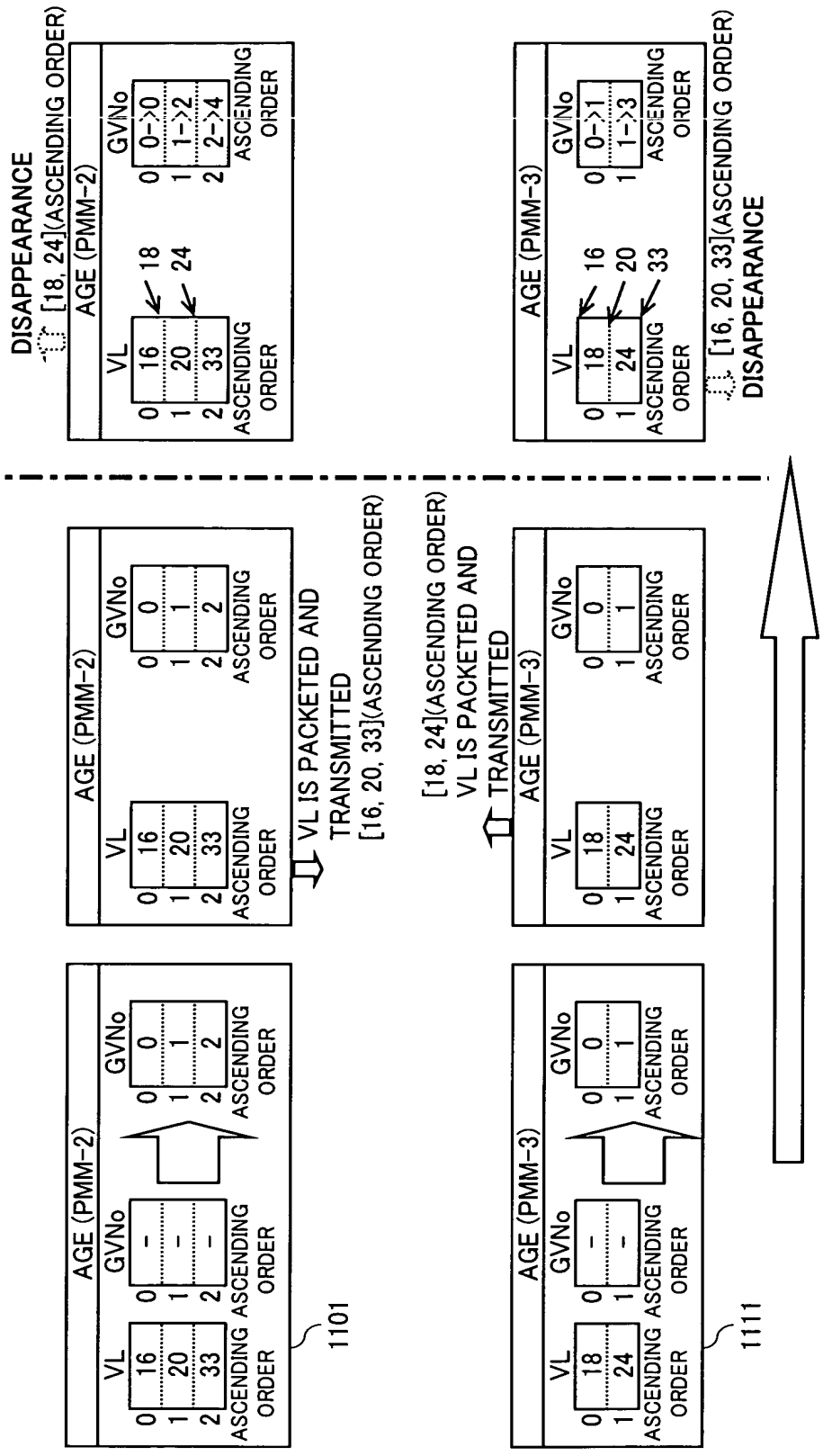

AGE (PMM-2)
VL
GVNo
ASCENDING ORDER
ASCENDING ORDER
1101
VL IS PACKETED AND TRANSMITTED
[16, 20, 33](ASCENDING ORDER)
DISAPPEARANCE
[18, 24](ASCENDING ORDER)
AGE (PMM-3)
1111
[18, 24](ASCENDING ORDER)
VL IS PACKETED AND TRANSMITTED
[16, 20, 33](ASCENDING ORDER)
DISAPPEARANCE

FIG.12

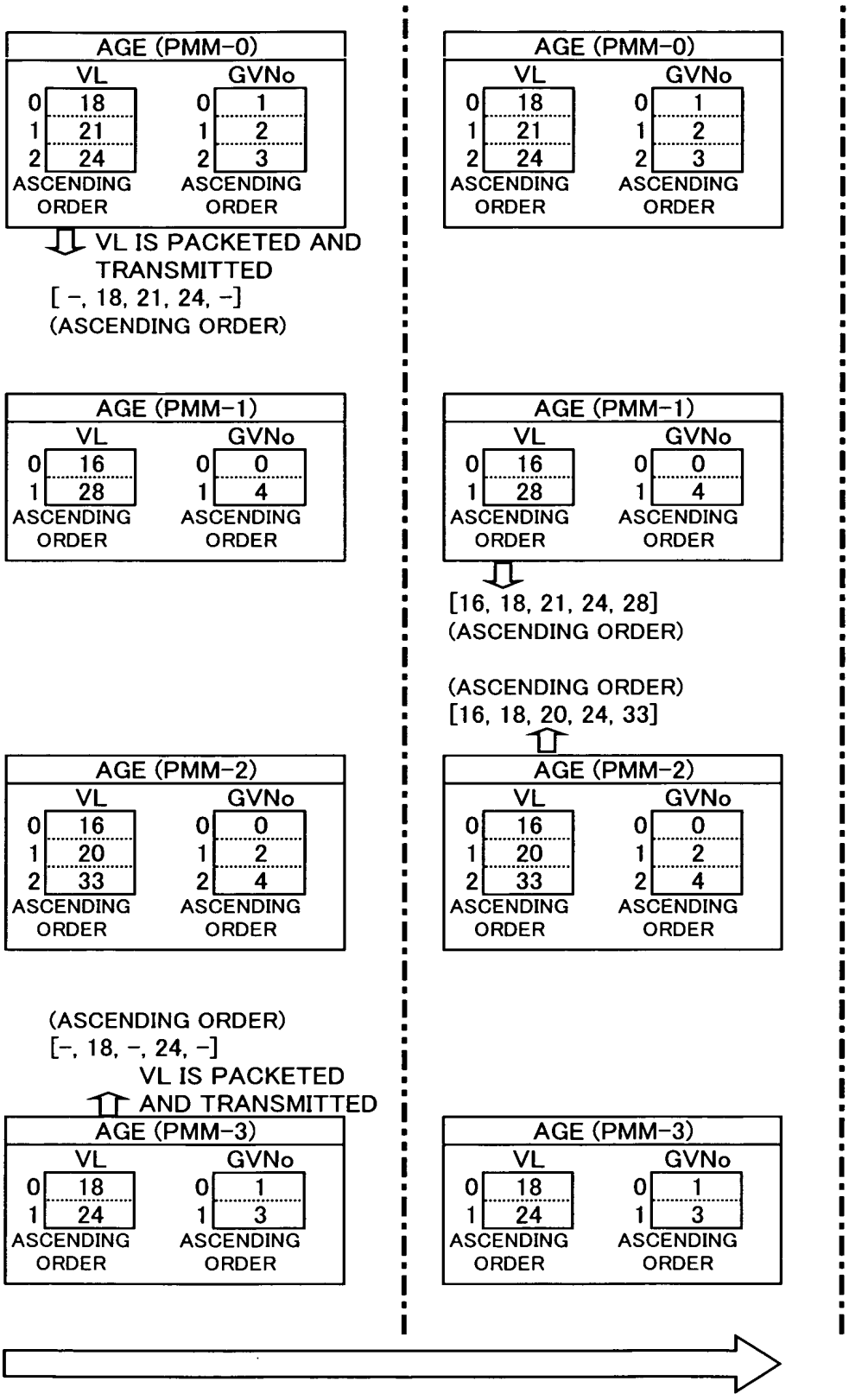

AGE (PMM-0)
VL
GVNo
0 18
1 21
2 24
ASCENDING ORDER
0 1
1 2
2 3
ASCENDING ORDER
VL IS PACKETED AND TRANSMITTED
[-, 18, 21, 24, -]
(ASCENDING ORDER)
AGE (PMM-1)
0 16
1 28
0 0
1 4
[16, 18, 21, 24, 28]
(ASCENDING ORDER)
(ASCENDING ORDER)
[16, 18, 20, 24, 33]
AGE (PMM-2)
0 16
1 20
2 33
0 0
1 2
2 4
(ASCENDING ORDER)
[-, 18, -, 24, -]
VL IS PACKETED AND TRANSMITTED
AGE (PMM-3)
0 18
1 24
0 1
1 3

FIG.13

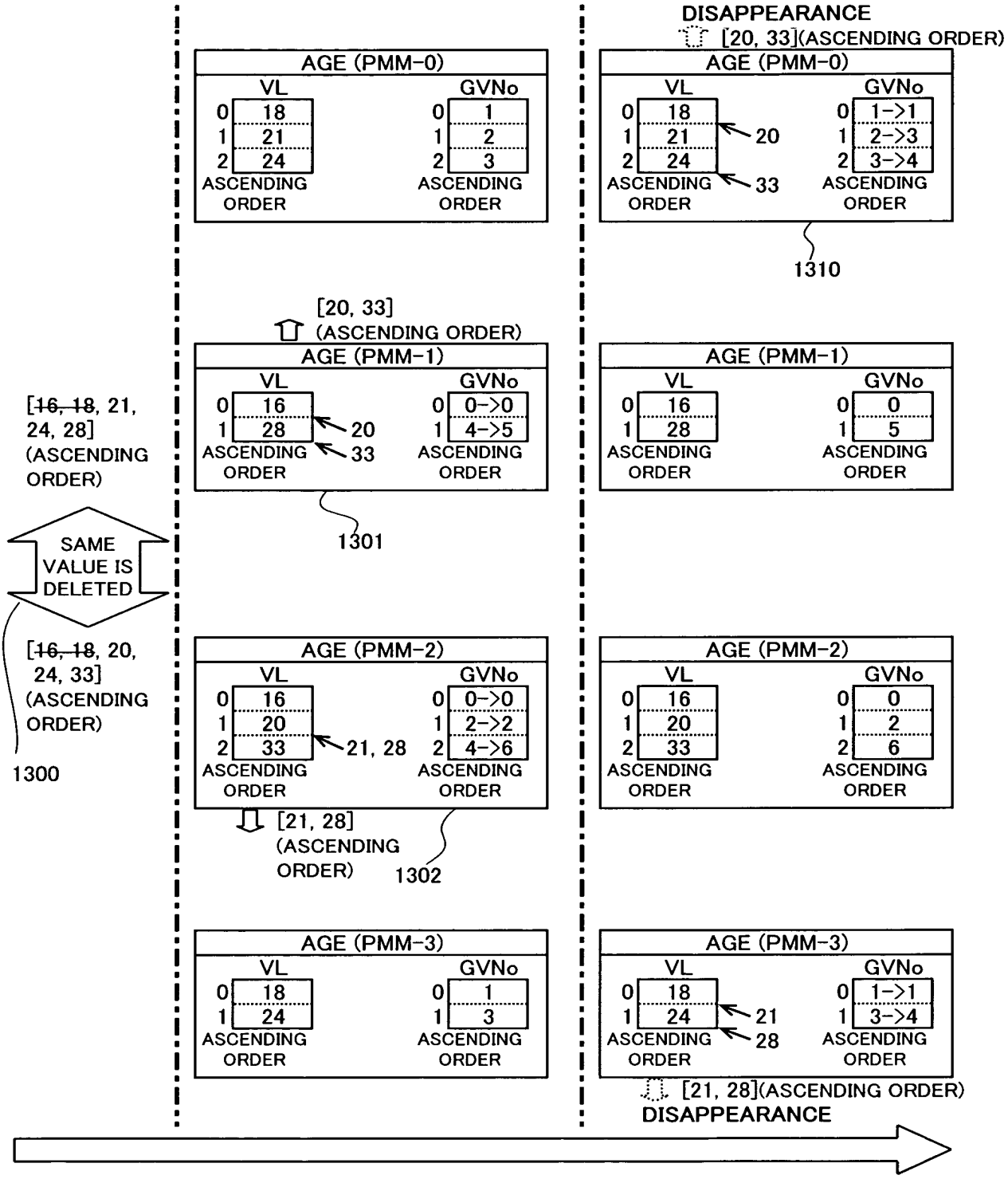

DISAPPEARANCE
[20, 33](ASCENDING ORDER)
AGE (PMM-0)
VL
GVNo
0 18
1 21
2 24
ASCENDING ORDER
0 1
1 2
2 3
ASCENDING ORDER
20
33
0 1->1
1 2->3
2 3->4
1310
[20, 33]
(ASCENDING ORDER)
AGE (PMM-1)
0 16
1 28
0 0->0
1 4->5
1301
0 0
1 5
[16, 18, 21, 24, 28]
(ASCENDING ORDER)
SAME VALUE IS DELETED
AGE (PMM-2)
0 16
1 20
2 33
21, 28
0 2->2
2 4->6
[16, 18, 20, 24, 33]
(ASCENDING ORDER)
1300
[21, 28]
(ASCENDING ORDER)
1302
0 2
2 6
AGE (PMM-3)
0 18
1 24
0 1
1 3
21
28
0 3->4
[21, 28](ASCENDING ORDER)
DISAPPEARANCE

FIG.14A

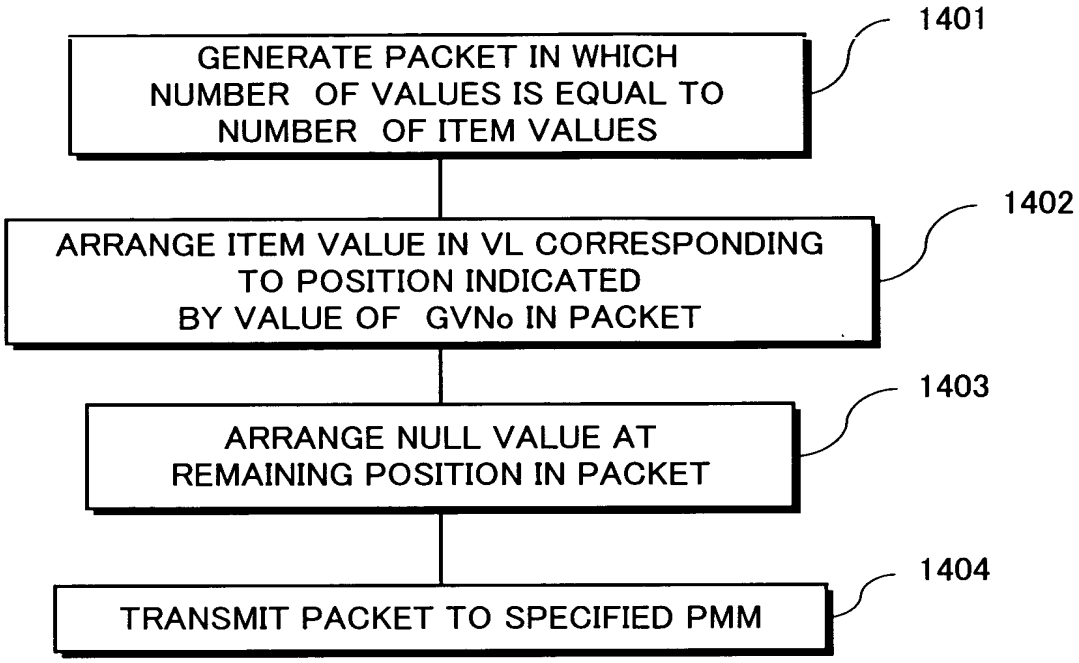


FIG.14B

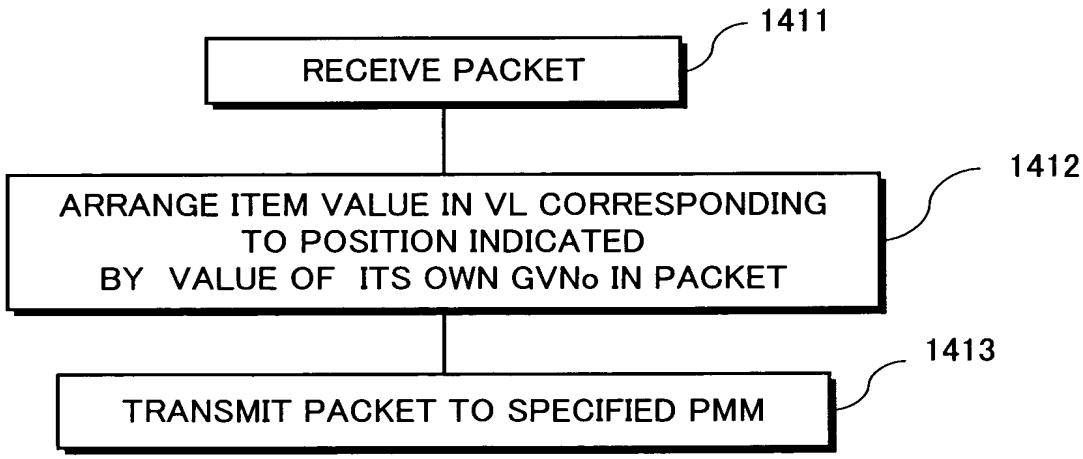


FIG.15A

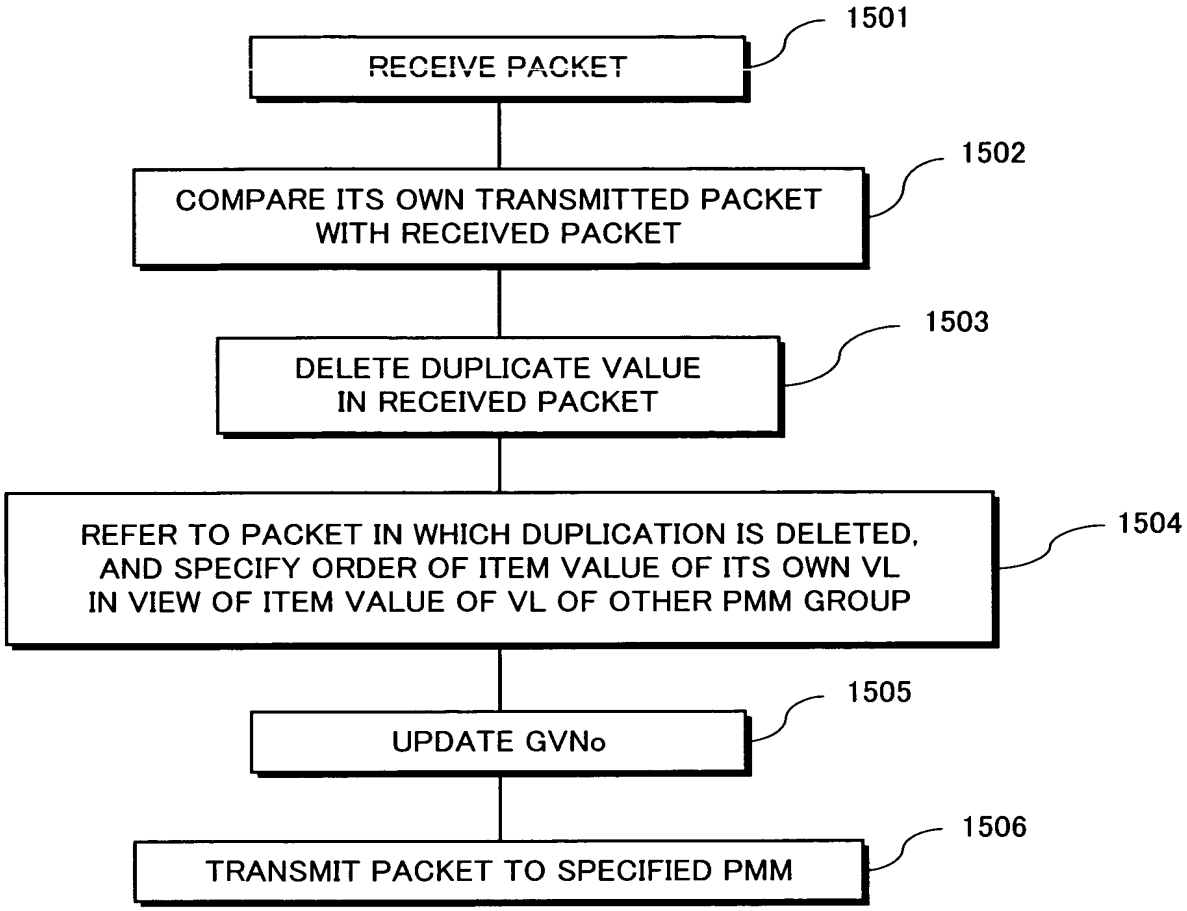


FIG.15B

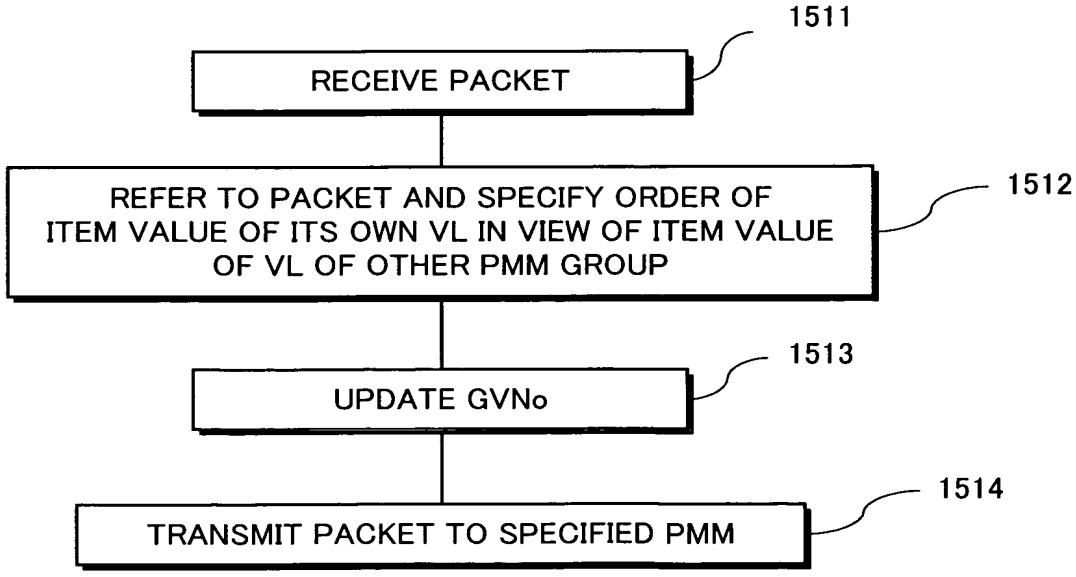


FIG.16

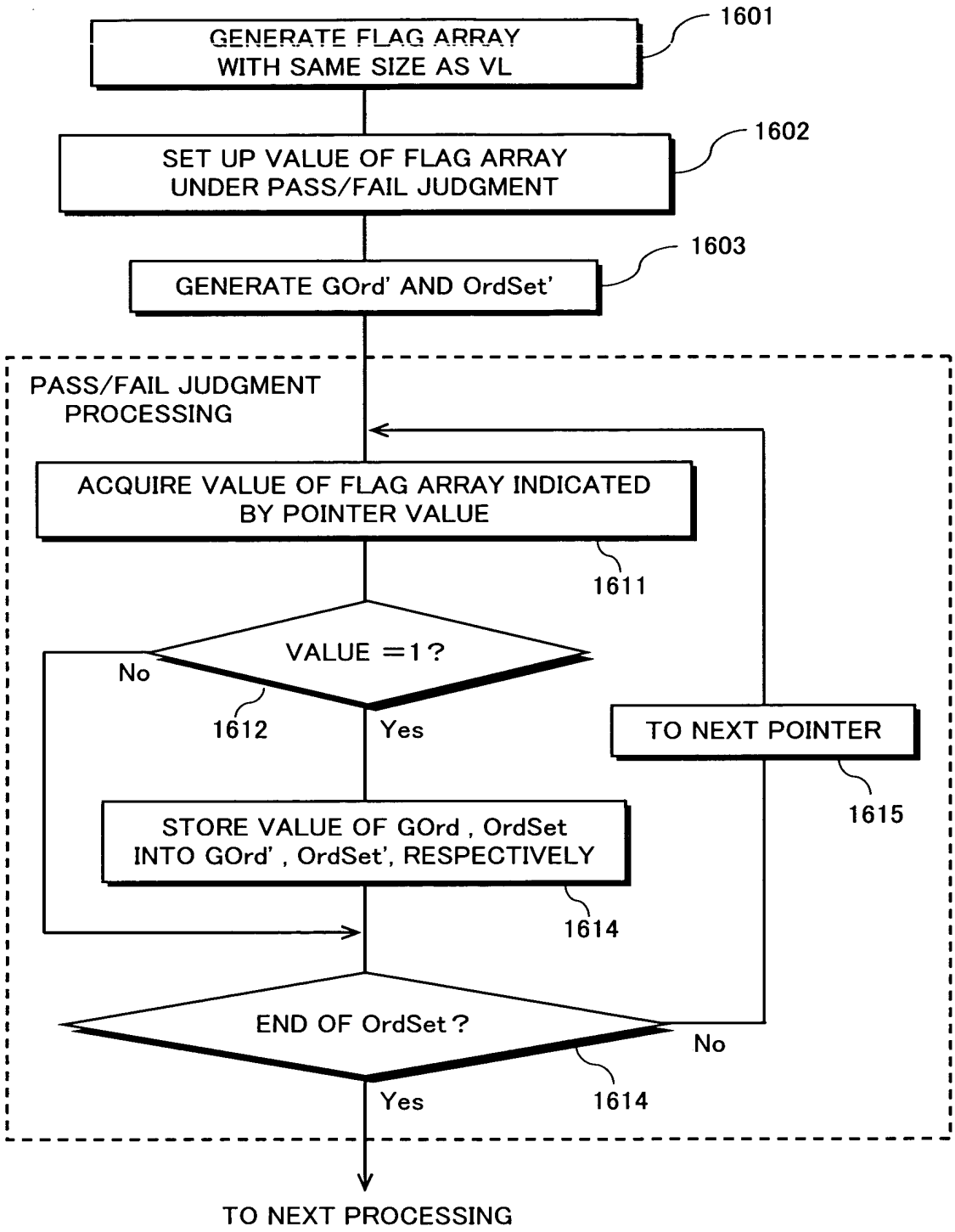

GENERATE FLAG ARRAY WITH SAME SIZE AS VL
1601
SET UP VALUE OF FLAG ARRAY UNDER PASS/FAIL JUDGMENT
1602
GENERATE GOrd' AND OrdSet'
1603
PASS/FAIL JUDGMENT PROCESSING
ACQUIRE VALUE OF FLAG ARRAY INDICATED BY POINTER VALUE
1611
VALUE =1?
No
1612
Yes
TO NEXT POINTER
1615
STORE VALUE OF GOrd , OrdSet INTO GOrd' , OrdSet', RESPECTIVELY
1614
END OF OrdSet?
No
Yes
1614
TO NEXT PROCESSING

FIG.17

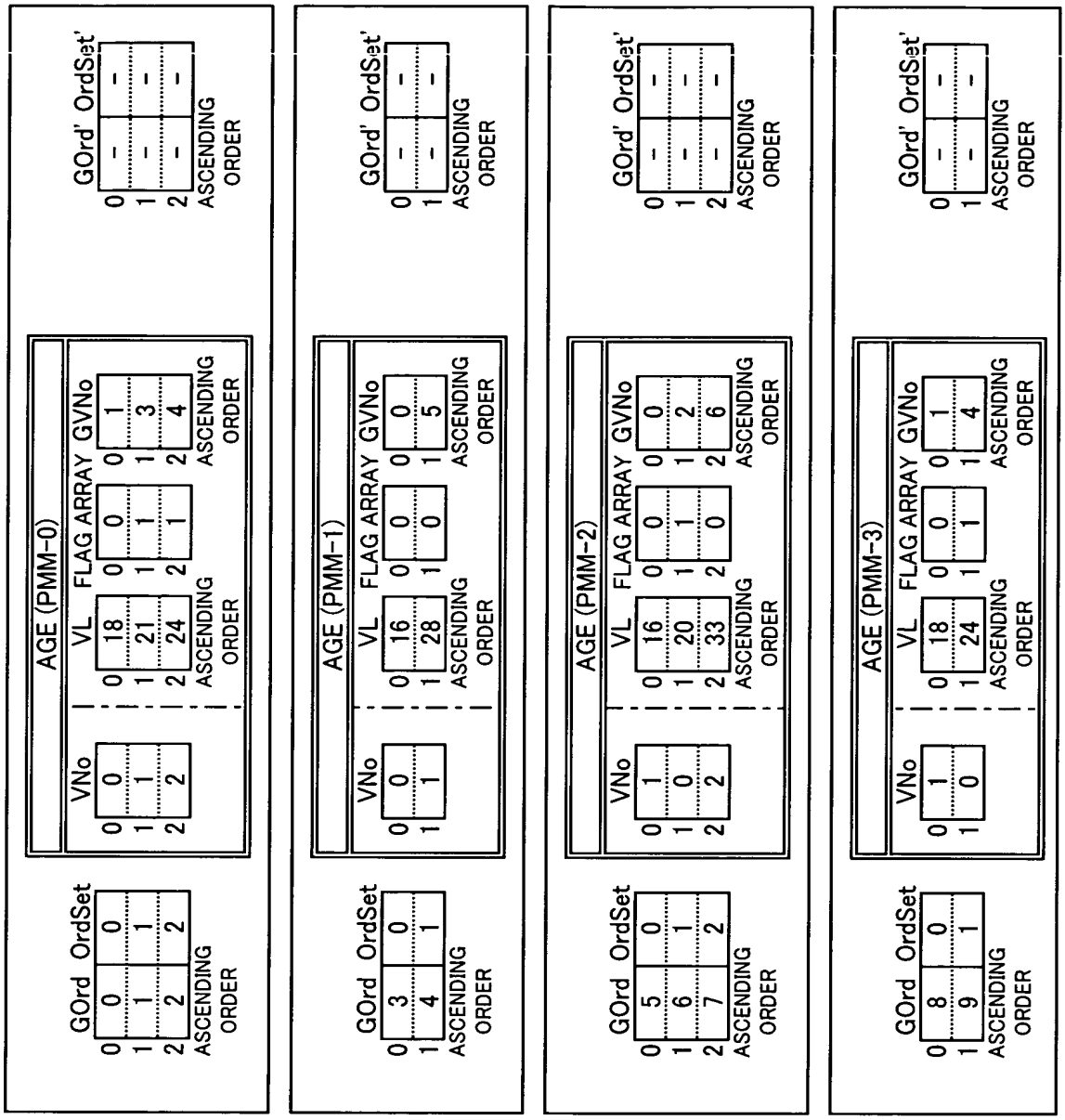

AGE (PMM-0)
VNo
VL
FLAG ARRAY
GVNo
GOrd
OrdSet
GOrd'
OrdSet'
ASCENDING ORDER
AGE (PMM-1)
AGE (PMM-2)
AGE (PMM-3)

FIG.18

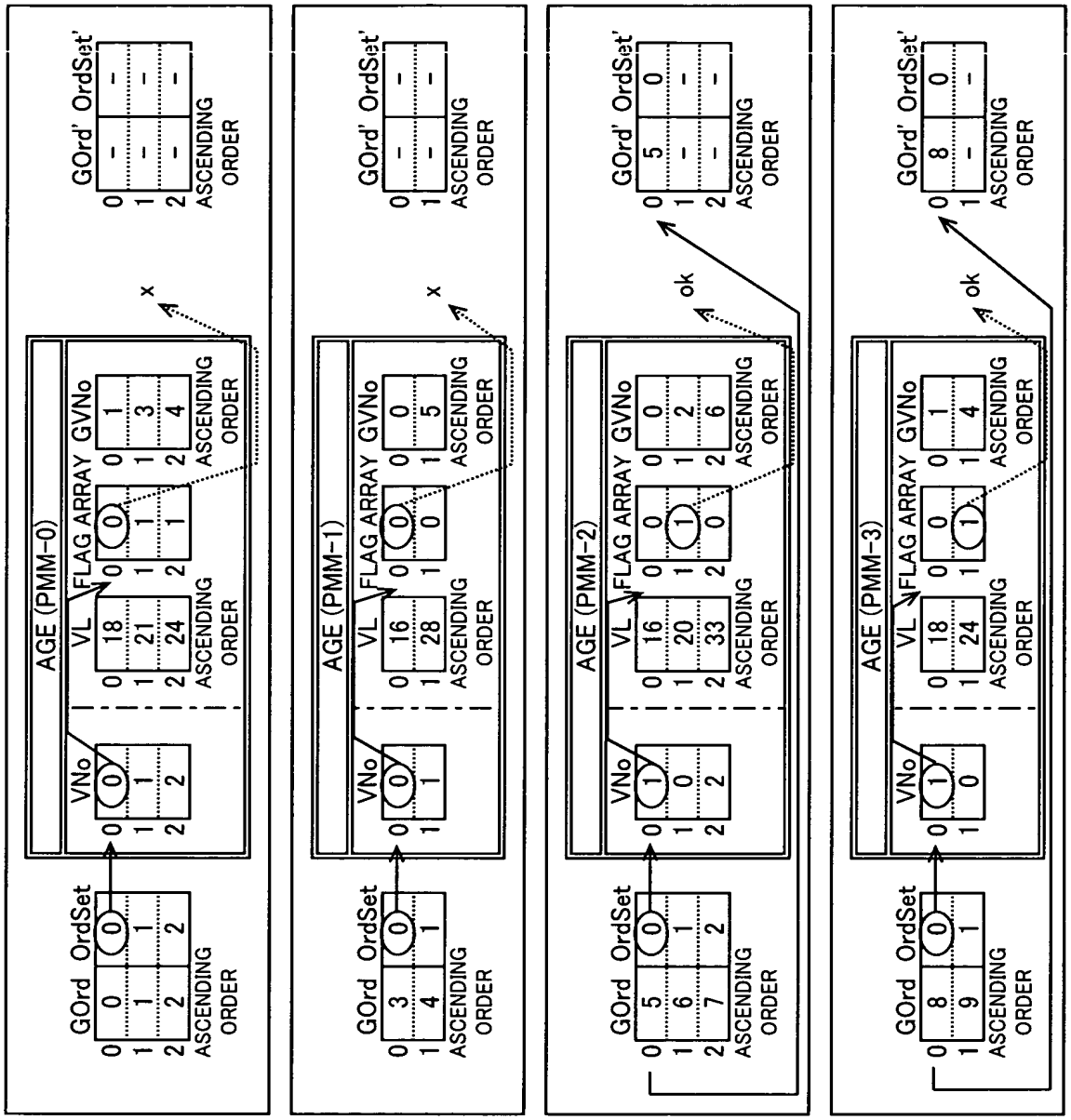

AGE (PMM-0)
AGE (PMM-1)
AGE (PMM-2)
AGE (PMM-3)
VNo
VL
FLAG ARRAY
GVNo
GOrd
OrdSet
GOrd'
OrdSet'
ASCENDING ORDER
x
ok

FIG.19

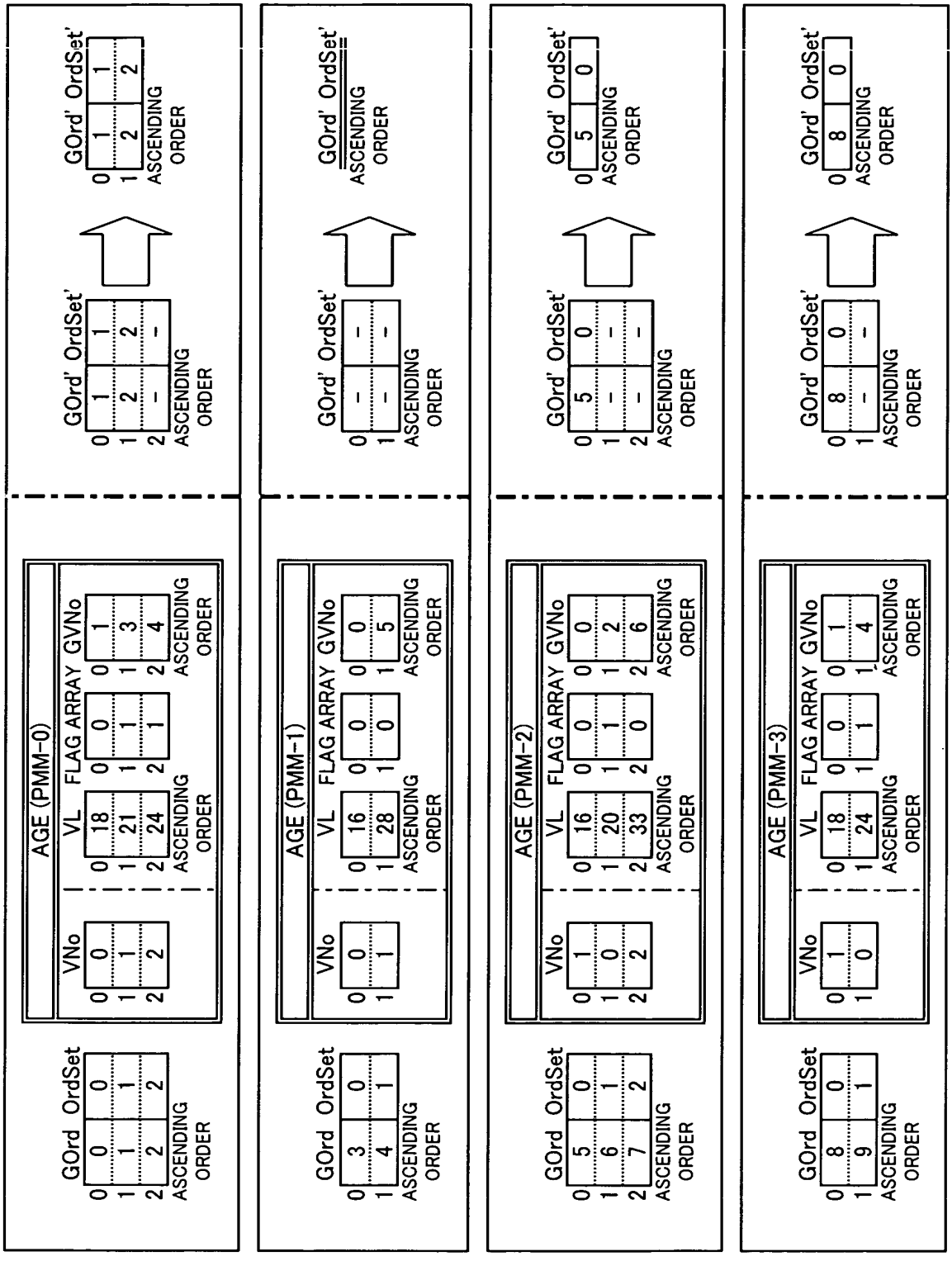

AGE (PMM-0)
VNo
VL
FLAG ARRAY
GVNo
ASCENDING ORDER
GOrd OrdSet
GOrd' OrdSet'
AGE (PMM-1)
AGE (PMM-2)
AGE (PMM-3)

FIG.20

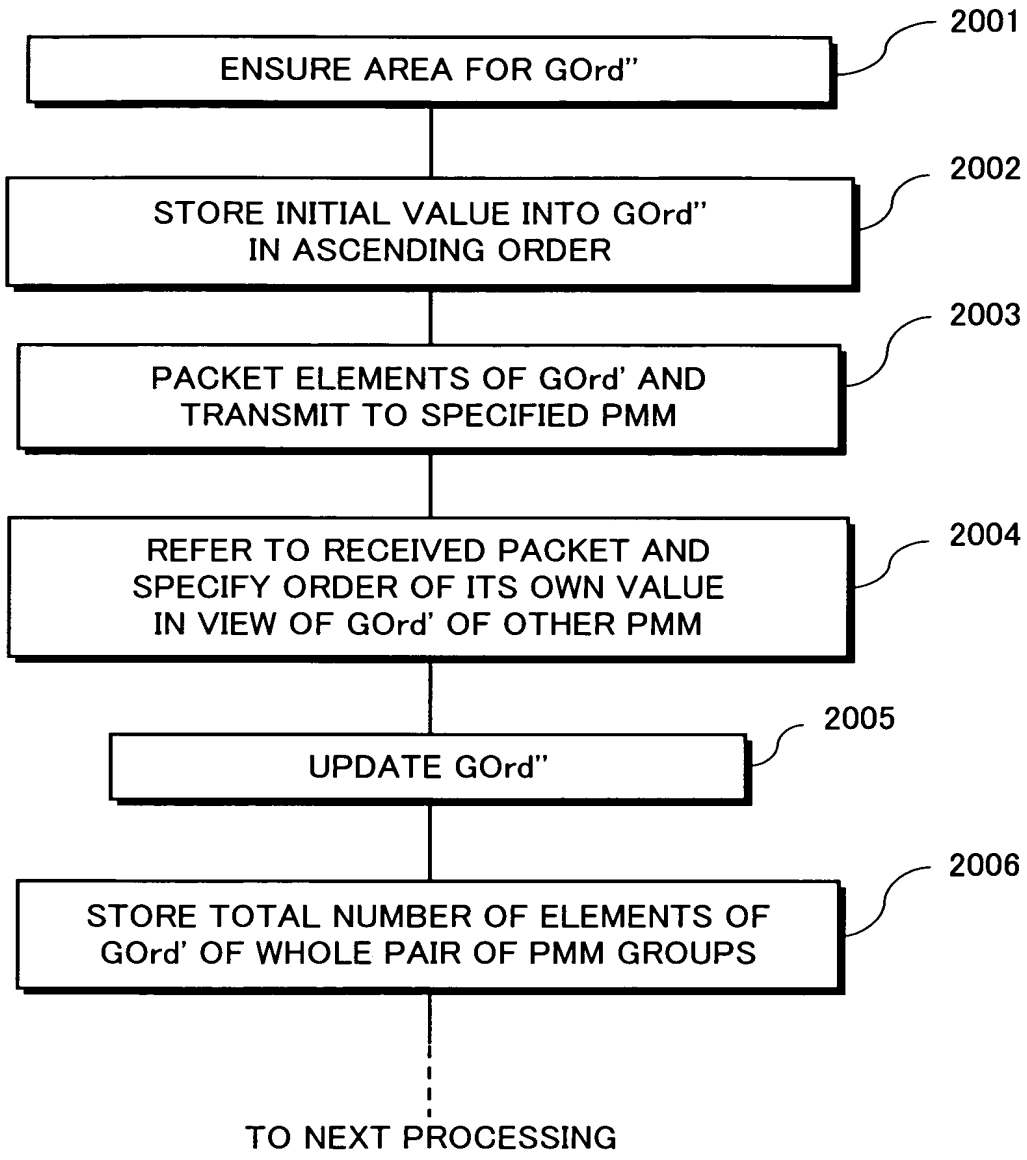

2001
ENSURE AREA FOR GOrd"
2002
STORE INITIAL VALUE INTO GOrd"
IN ASCENDING ORDER
2003
PACKET ELEMENTS OF GOrd' AND
TRANSMIT TO SPECIFIED PMM
2004
REFER TO RECEIVED PACKET AND
SPECIFY ORDER OF ITS OWN VALUE
IN VIEW OF GOrd' OF OTHER PMM
2005
UPDATE GOrd"
2006
STORE TOTAL NUMBER OF ELEMENTS OF
GOrd' OF WHOLE PAIR OF PMM GROUPS
TO NEXT PROCESSING

FIG.21

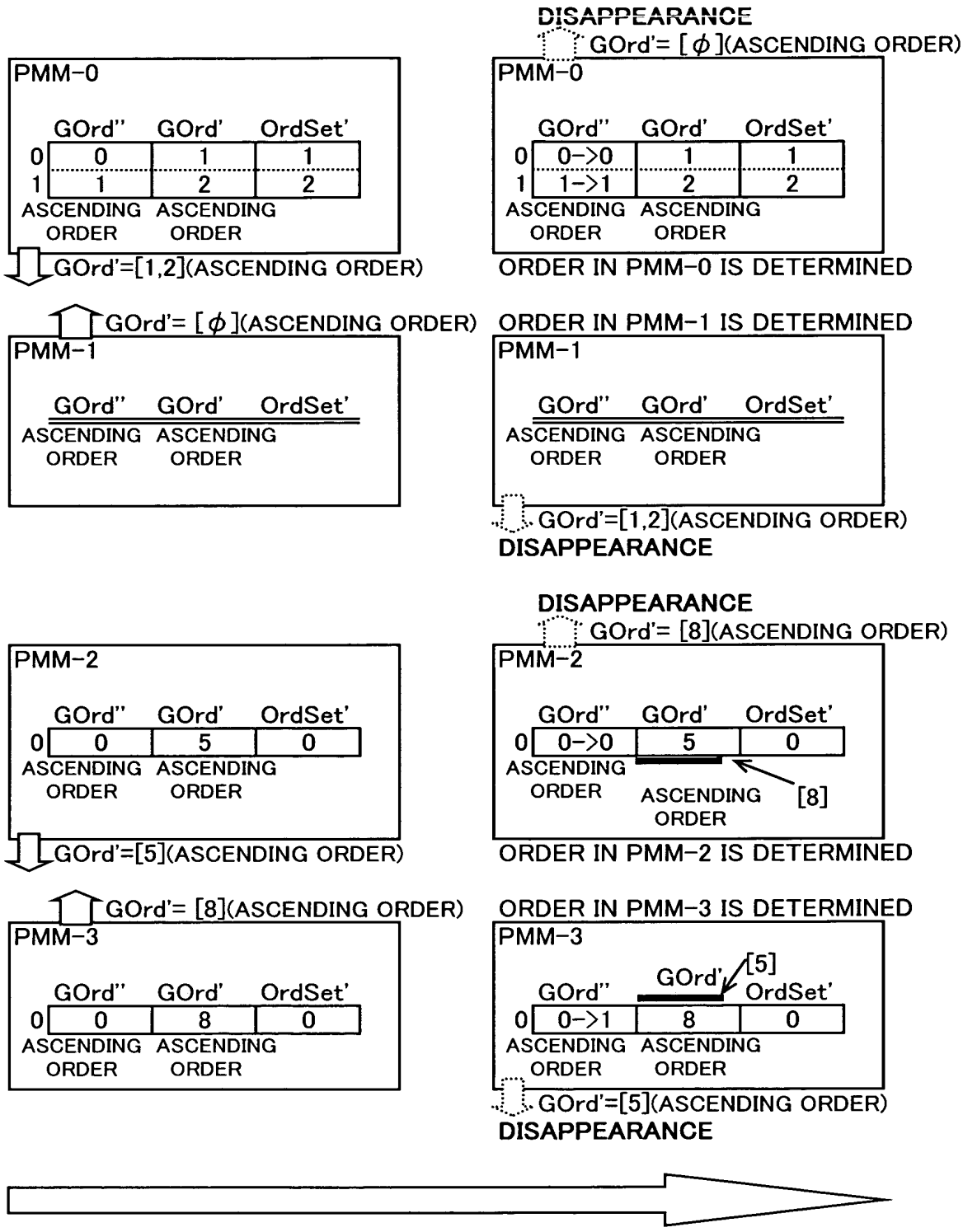

PMM-0
GOrd''
GOrd'
OrdSet'
0
0
1
1
1
2
2
ASCENDING ORDER
ASCENDING ORDER
GOrd'=[1,2](ASCENDING ORDER)
GOrd'= [φ](ASCENDING ORDER)
PMM-1
GOrd''
GOrd'
OrdSet'
ASCENDING ORDER
ASCENDING ORDER
PMM-2
GOrd''
GOrd'
OrdSet'
0
0
5
0
ASCENDING ORDER
ASCENDING ORDER
GOrd'=[5](ASCENDING ORDER)
GOrd'= [8](ASCENDING ORDER)
PMM-3
GOrd''
GOrd'
OrdSet'
0
0
8
0
ASCENDING ORDER
ASCENDING ORDER
DISAPPEARANCE
GOrd'= [φ](ASCENDING ORDER)
PMM-0
GOrd''
GOrd'
OrdSet'
0
0->0
1
1
1
1->1
2
2
ASCENDING ORDER
ASCENDING ORDER
ORDER IN PMM-0 IS DETERMINED
ORDER IN PMM-1 IS DETERMINED
PMM-1
GOrd''
GOrd'
OrdSet'
ASCENDING ORDER
ASCENDING ORDER
GOrd'=[1,2](ASCENDING ORDER)
DISAPPEARANCE
DISAPPEARANCE
GOrd'= [8](ASCENDING ORDER)
PMM-2
GOrd''
GOrd'
OrdSet'
0
0->0
5
0
ASCENDING ORDER
ASCENDING ORDER
[8]
ORDER IN PMM-2 IS DETERMINED
ORDER IN PMM-3 IS DETERMINED
PMM-3
GOrd'
[5]
GOrd''
OrdSet'
0
0->1
8
0
ASCENDING ORDER
ASCENDING ORDER
GOrd'=[5](ASCENDING ORDER)
DISAPPEARANCE

FIG.22A

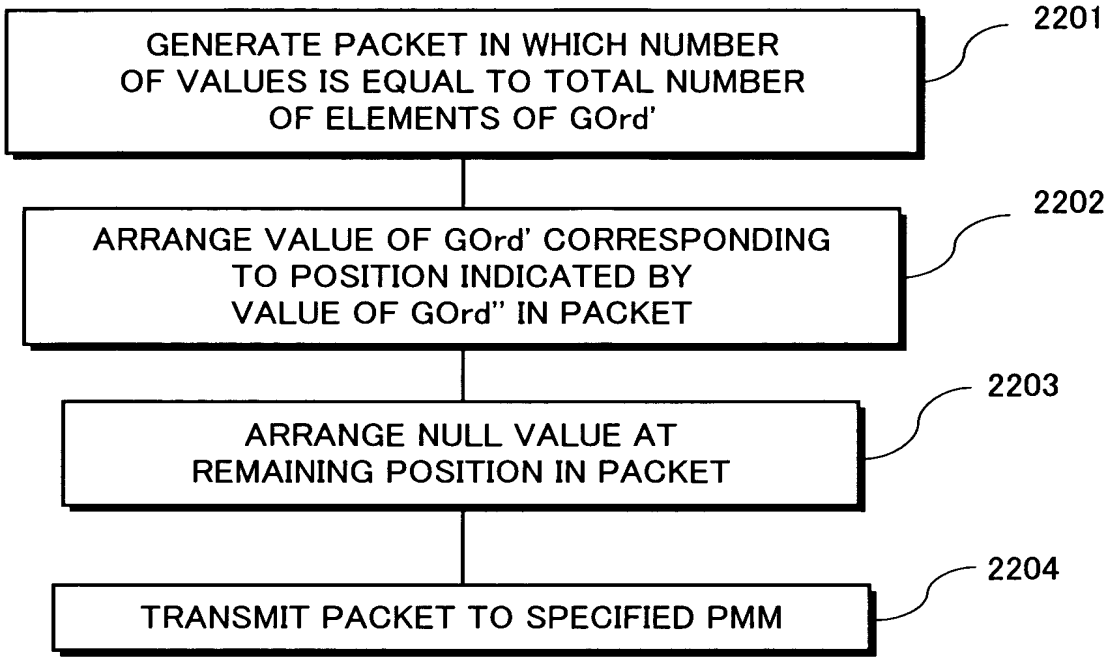


FIG.22B

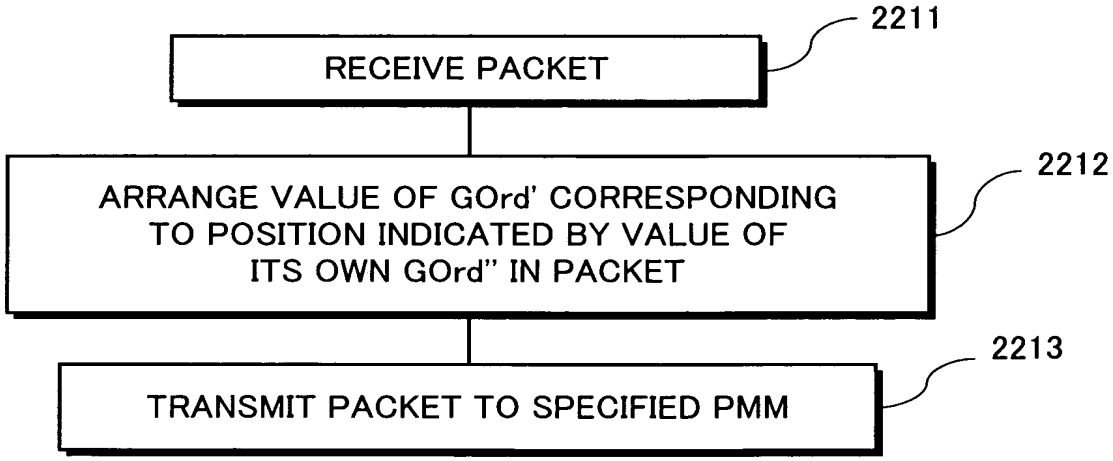


FIG.23

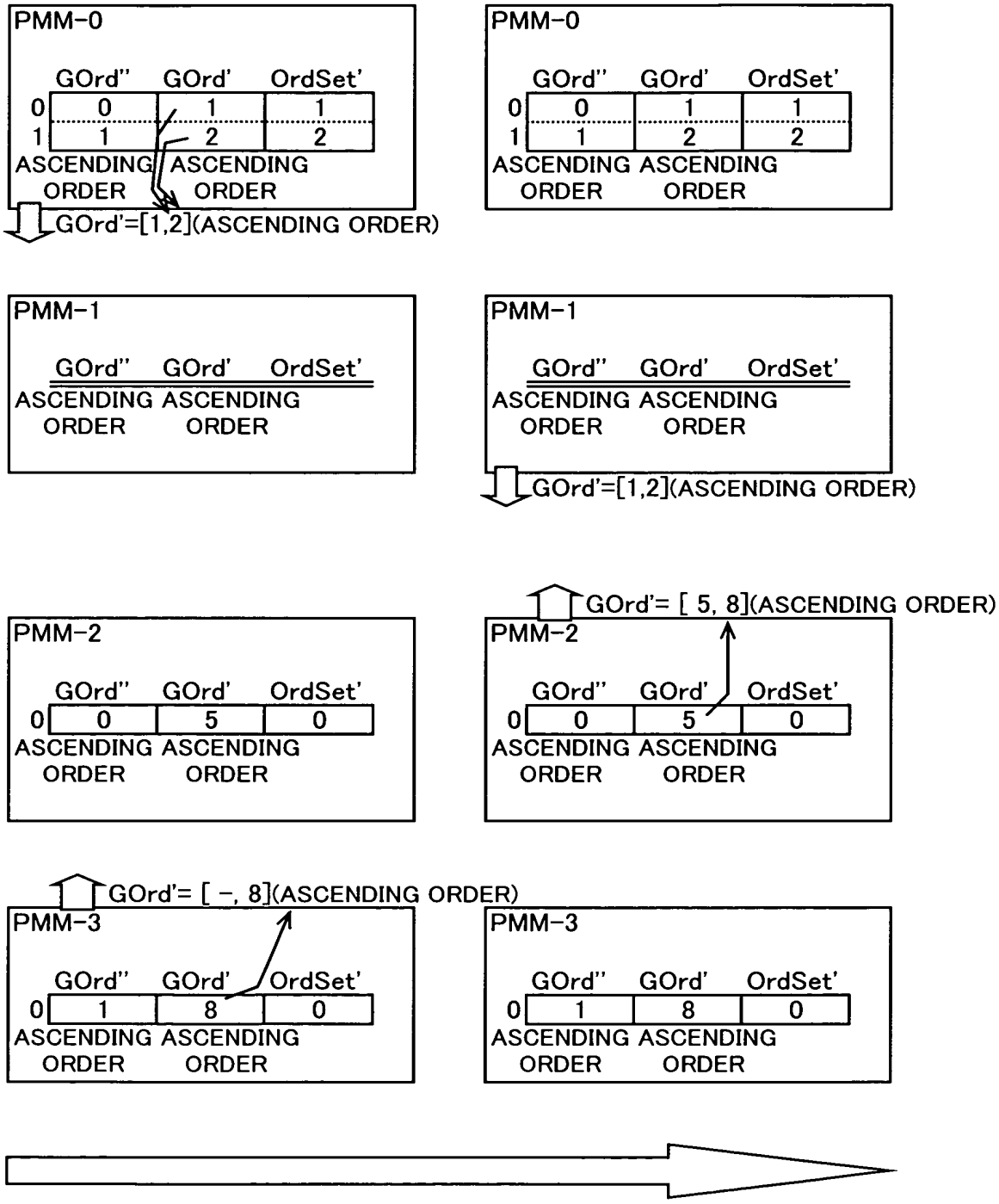

PMM-0
GOrd'' GOrd' OrdSet'
0 0 1 1
1 1 2 2
ASCENDING ORDER
ASCENDING ORDER
GOrd'=[1,2](ASCENDING ORDER)
PMM-0
GOrd'' GOrd' OrdSet'
0 0 1 1
1 1 2 2
ASCENDING ORDER
ASCENDING ORDER
PMM-1
GOrd'' GOrd' OrdSet'
ASCENDING ORDER
ASCENDING ORDER
PMM-1
GOrd'' GOrd' OrdSet'
ASCENDING ORDER
ASCENDING ORDER
GOrd'=[1,2](ASCENDING ORDER)
GOrd'= [5, 8](ASCENDING ORDER)
PMM-2
GOrd'' GOrd' OrdSet'
0 0 5 0
ASCENDING ORDER
ASCENDING ORDER
PMM-2
GOrd'' GOrd' OrdSet'
0 0 5 0
ASCENDING ORDER
ASCENDING ORDER
GOrd'= [-, 8](ASCENDING ORDER)
PMM-3
GOrd'' GOrd' OrdSet'
0 1 8 0
ASCENDING ORDER
ASCENDING ORDER
PMM-3
GOrd'' GOrd' OrdSet'
0 1 8 0
ASCENDING ORDER
ASCENDING ORDER

FIG.24

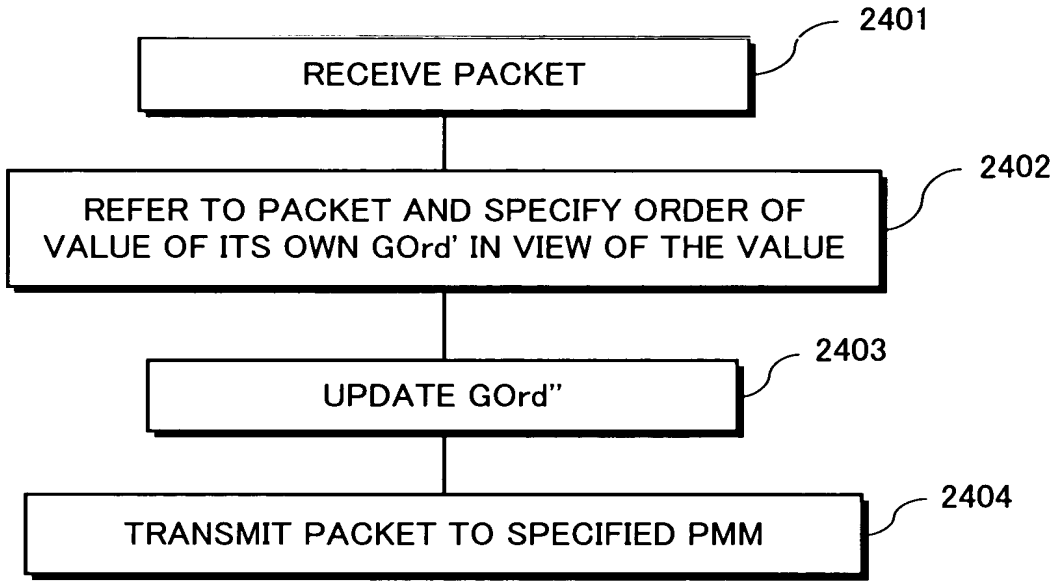

2401
RECEIVE PACKET
2402
REFER TO PACKET AND SPECIFY ORDER OF VALUE OF ITS OWN GOrd' IN VIEW OF THE VALUE
2403
UPDATE GOrd"
2404
TRANSMIT PACKET TO SPECIFIED PMM

FIG.55

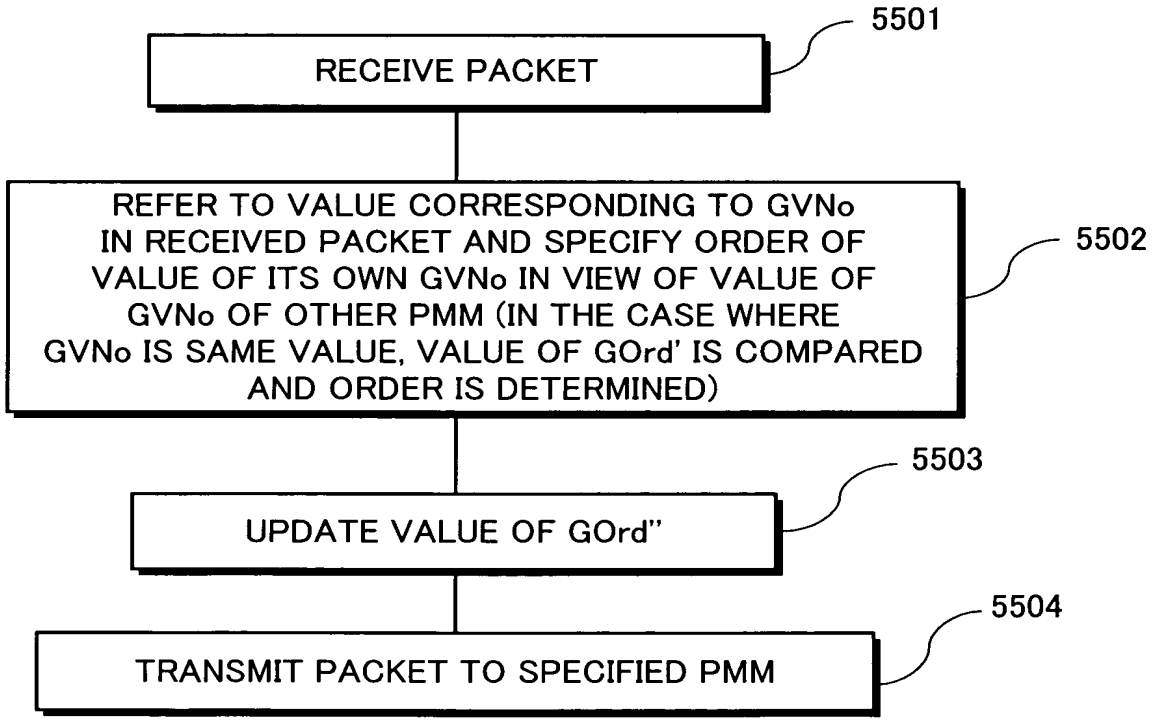

5501
RECEIVE PACKET
5502
REFER TO VALUE CORRESPONDING TO GVNo IN RECEIVED PACKET AND SPECIFY ORDER OF VALUE OF ITS OWN GVNo IN VIEW OF VALUE OF GVNo OF OTHER PMM (IN THE CASE WHERE GVNo IS SAME VALUE, VALUE OF GOrd' IS COMPARED AND ORDER IS DETERMINED)
5503
UPDATE VALUE OF GOrd"
5504
TRANSMIT PACKET TO SPECIFIED PMM

FIG.25

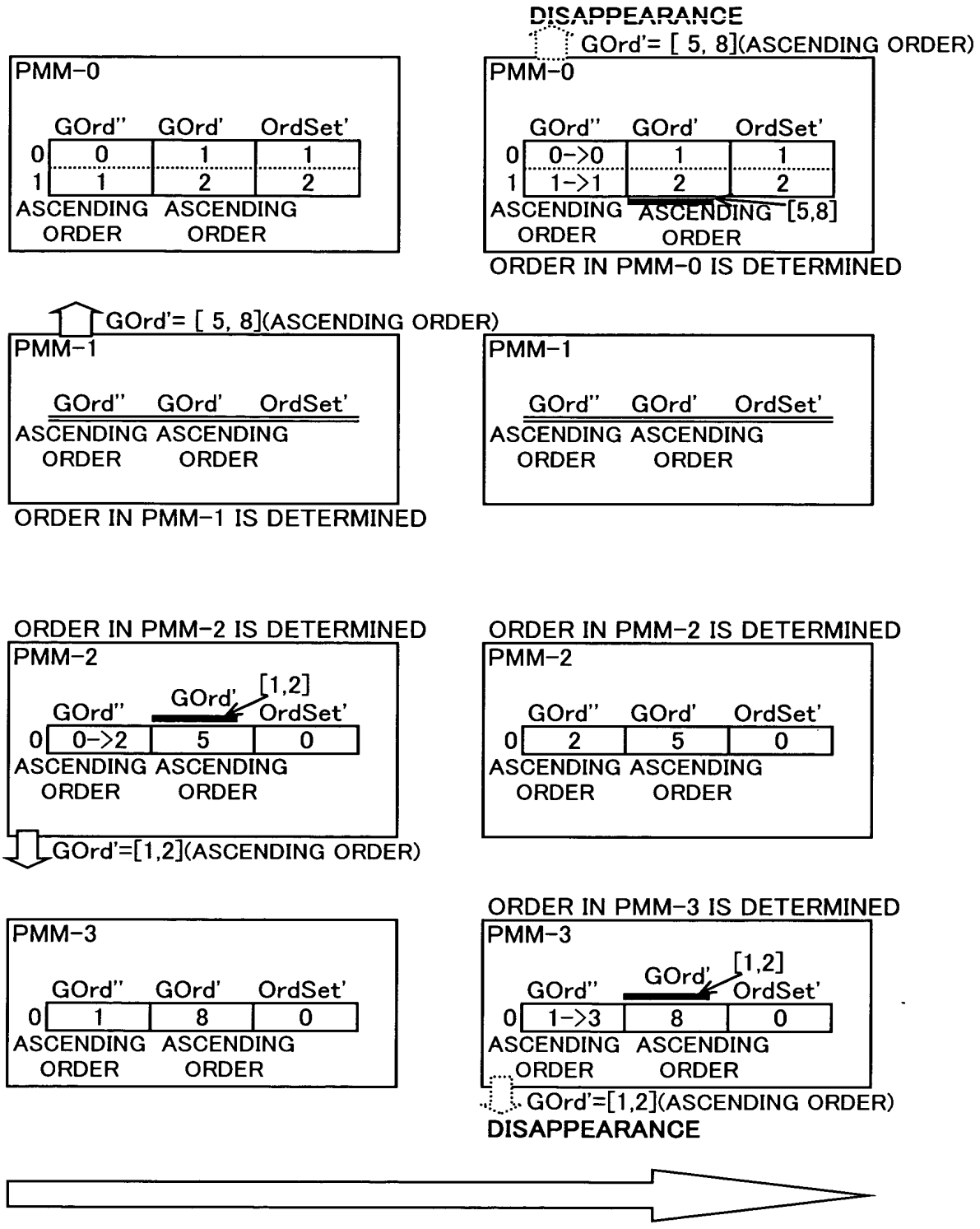

DISAPPEARANCE
GOrd'= [5, 8](ASCENDING ORDER)
PMM-0
GOrd'' GOrd' OrdSet'
0 0 1 1
1 1 2 2
ASCENDING ORDER
ASCENDING ORDER
PMM-0
GOrd'' GOrd' OrdSet'
0 0->0 1 1
1 1->1 2 2
ASCENDING ORDER
ASCENDING ORDER
[5,8]
ORDER IN PMM-0 IS DETERMINED
GOrd'= [5, 8](ASCENDING ORDER)
PMM-1
GOrd'' GOrd' OrdSet'
ASCENDING ORDER
ASCENDING ORDER
ORDER IN PMM-1 IS DETERMINED
PMM-1
GOrd'' GOrd' OrdSet'
ASCENDING ORDER
ASCENDING ORDER
ORDER IN PMM-2 IS DETERMINED
PMM-2
[1,2]
GOrd'
GOrd'' OrdSet'
0 0->2 5 0
ASCENDING ORDER
ASCENDING ORDER
GOrd'=[1,2](ASCENDING ORDER)
ORDER IN PMM-2 IS DETERMINED
PMM-2
GOrd'' GOrd' OrdSet'
0 2 5 0
ASCENDING ORDER
ASCENDING ORDER
PMM-3
GOrd'' GOrd' OrdSet'
0 1 8 0
ASCENDING ORDER
ASCENDING ORDER
ORDER IN PMM-3 IS DETERMINED
PMM-3
[1,2]
GOrd'
GOrd'' OrdSet'
0 1->3 8 0
ASCENDING ORDER
ASCENDING ORDER
GOrd'=[1,2](ASCENDING ORDER)
DISAPPEARANCE

FIG.26

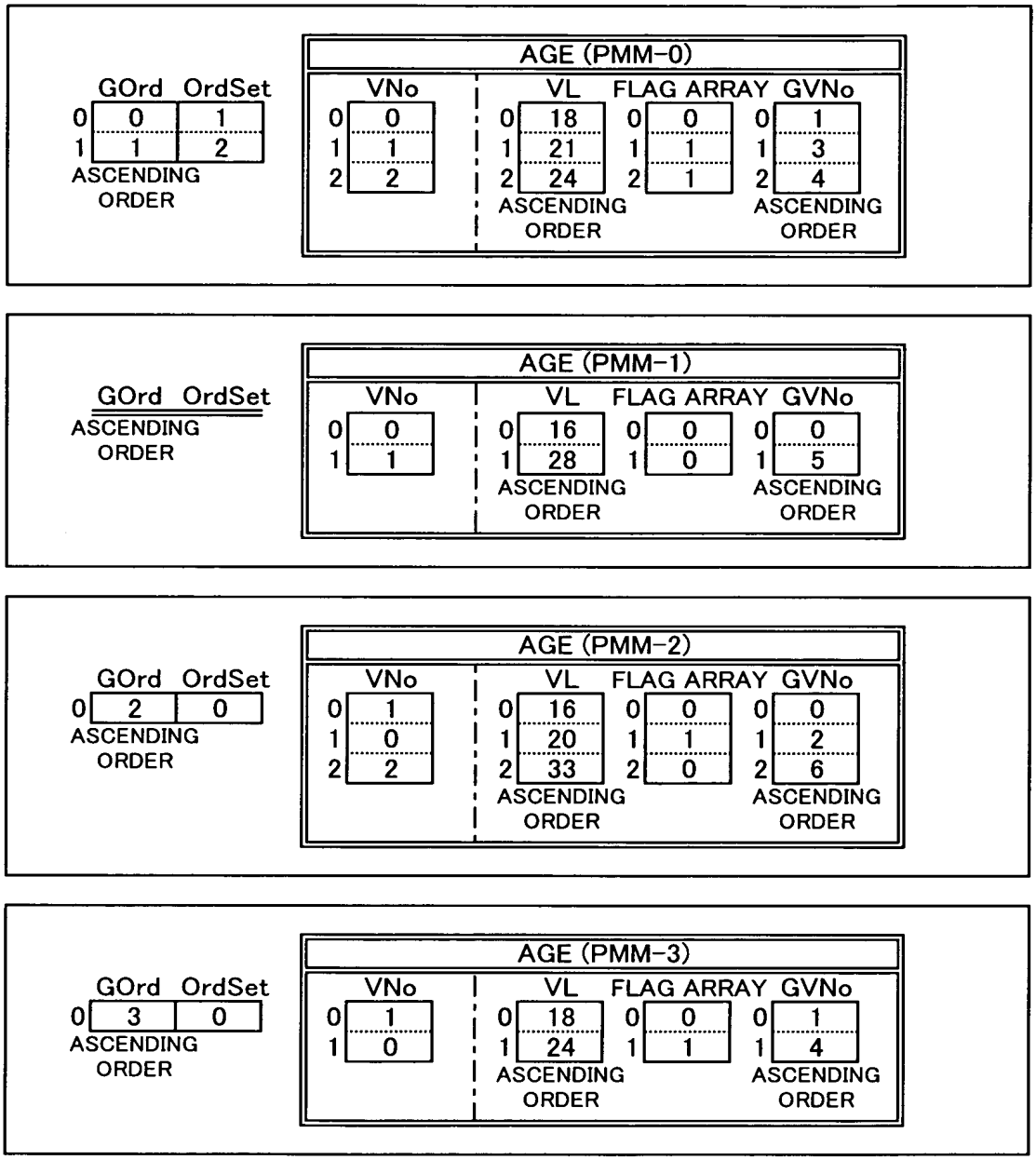

GOrd OrdSet
0 0 1
1 1 2
ASCENDING ORDER
AGE (PMM-0)
VNo
0 0
1 1
2 2
VL FLAG ARRAY GVNo
0 18 0 0 0 1
1 21 1 1 1 3
2 24 2 1 2 4
ASCENDING ORDER
ASCENDING ORDER
GOrd OrdSet
ASCENDING ORDER
AGE (PMM-1)
VNo
0 0
1 1
VL FLAG ARRAY GVNo
0 16 0 0 0 0
1 28 1 0 1 5
ASCENDING ORDER
ASCENDING ORDER
GOrd OrdSet
0 2 0
ASCENDING ORDER
AGE (PMM-2)
VNo
0 1
1 0
2 2
VL FLAG ARRAY GVNo
0 16 0 0 0 0
1 20 1 1 1 2
2 33 2 0 2 6
ASCENDING ORDER
ASCENDING ORDER
GOrd OrdSet
0 3 0
ASCENDING ORDER
AGE (PMM-3)
VNo
0 1
1 0
VL FLAG ARRAY GVNo
0 18 0 0 0 1
1 24 1 1 1 4
ASCENDING ORDER
ASCENDING ORDER

FIG.27

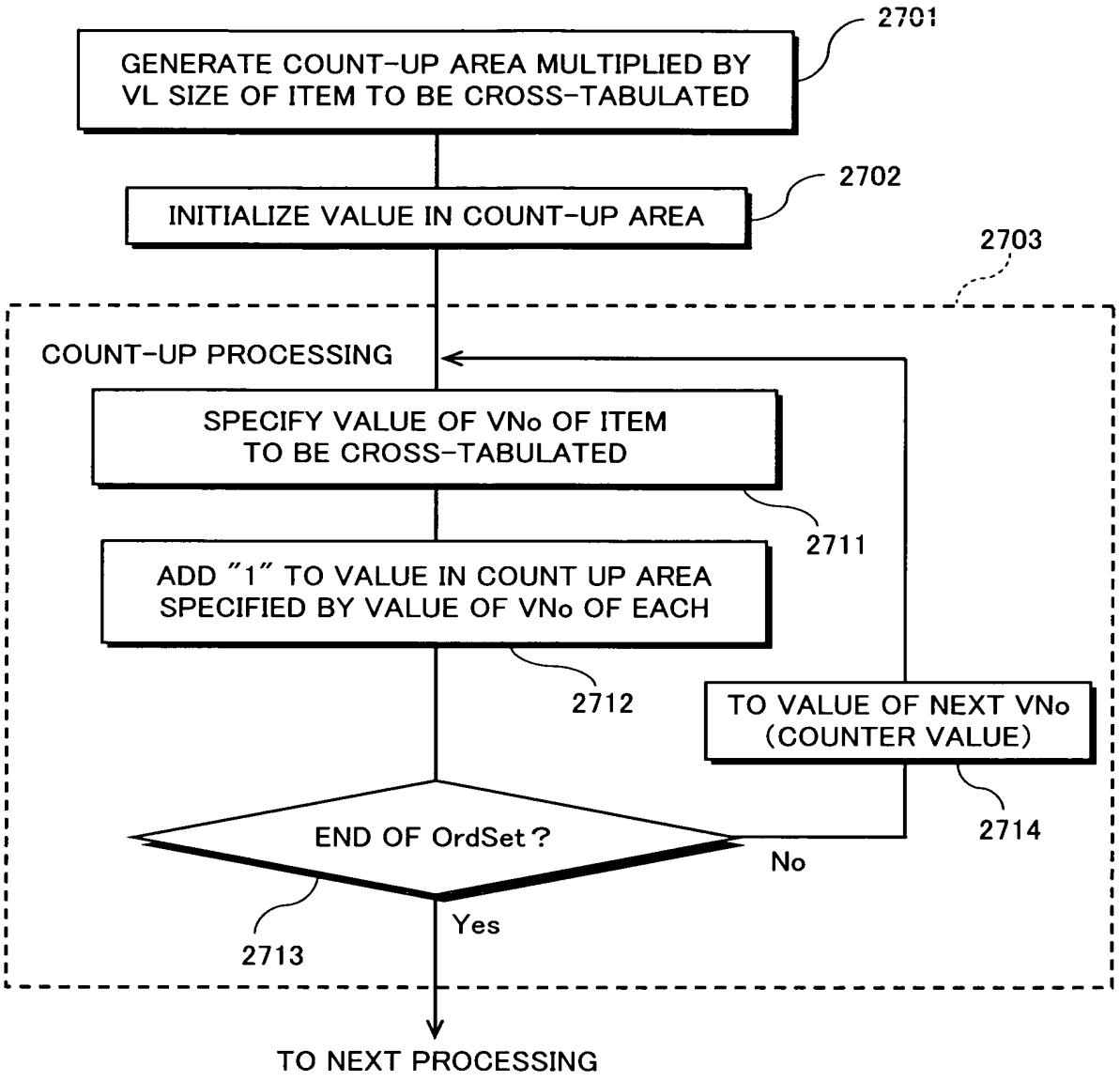

2701
GENERATE COUNT-UP AREA MULTIPLIED BY VL SIZE OF ITEM TO BE CROSS-TABULATED
2702
INITIALIZE VALUE IN COUNT-UP AREA
2703
COUNT-UP PROCESSING
SPECIFY VALUE OF VNo OF ITEM TO BE CROSS-TABULATED
2711
ADD "1" TO VALUE IN COUNT UP AREA SPECIFIED BY VALUE OF VNo OF EACH
2712
TO VALUE OF NEXT VNo (COUNTER VALUE)
2714
END OF OrdSet?
No
Yes
2713
TO NEXT PROCESSING

FIG.28

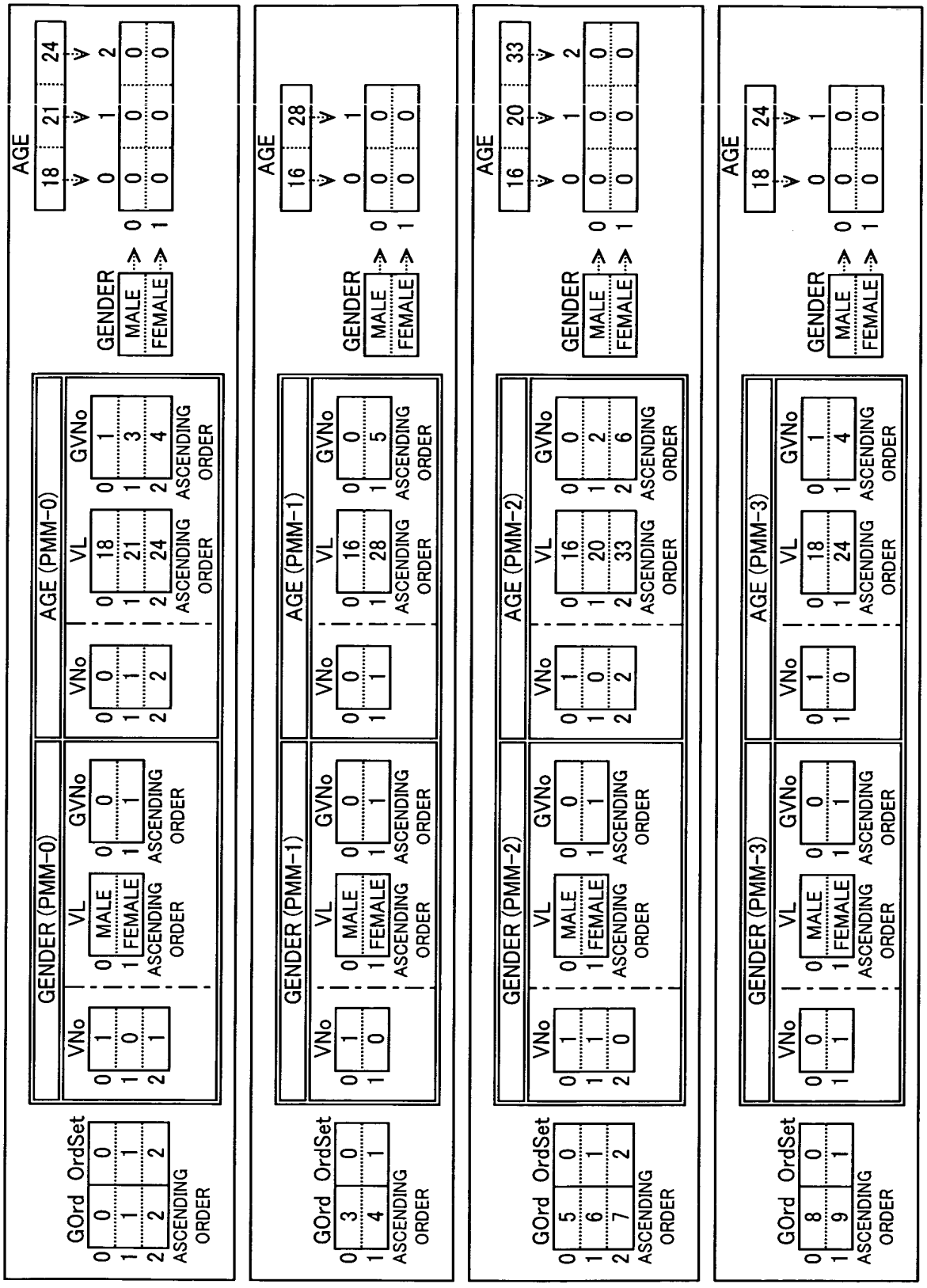

GENDER (PMM-0)
AGE (PMM-0)
GENDER (PMM-1)
AGE (PMM-1)
GENDER (PMM-2)
AGE (PMM-2)
GENDER (PMM-3)
AGE (PMM-3)
VNo
VL
GVNo
GOrd
OrdSet
MALE
FEMALE
GENDER
AGE
ASCENDING ORDER

FIG.29

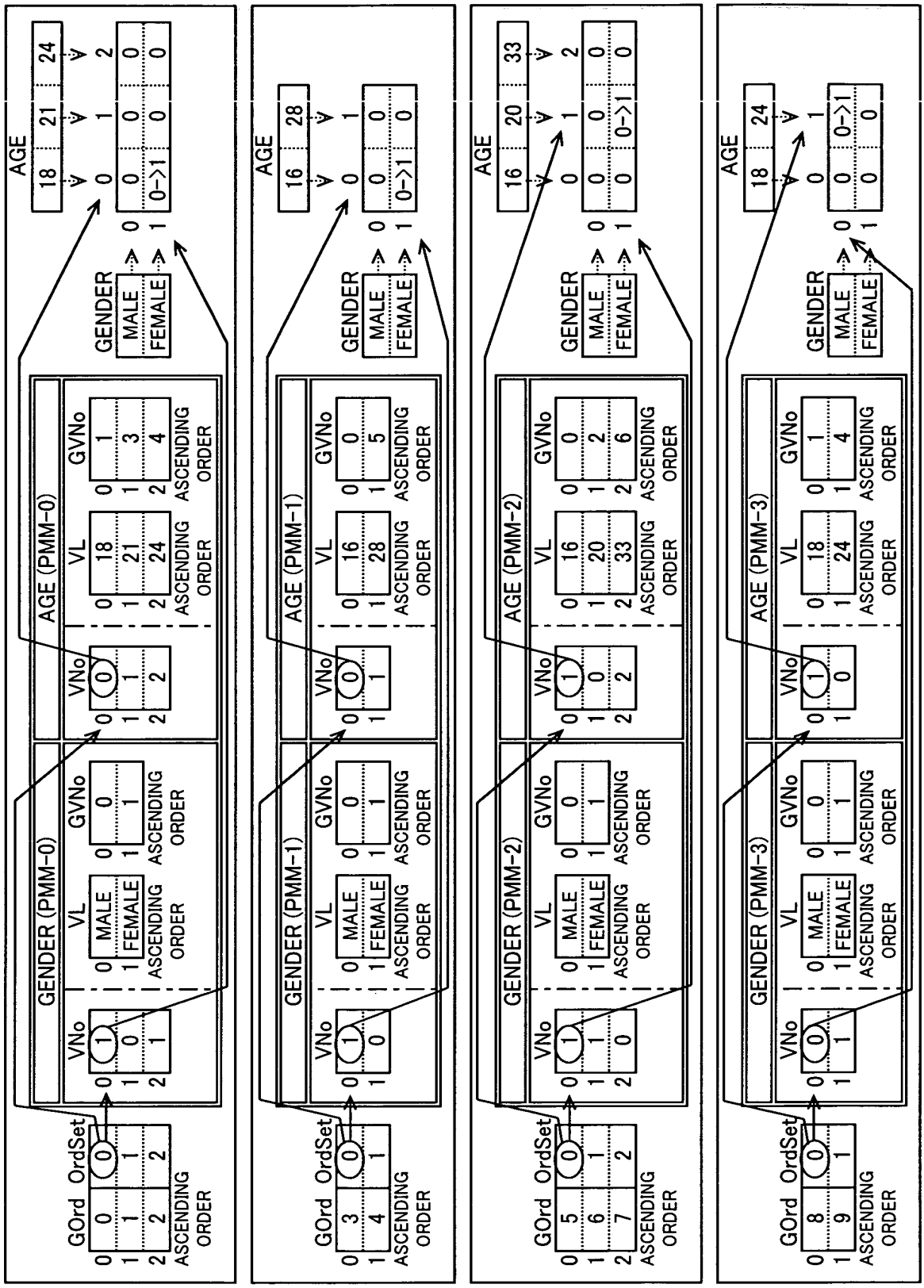

GENDER (PMM-0)
AGE (PMM-0)
GENDER (PMM-1)
AGE (PMM-1)
GENDER (PMM-2)
AGE (PMM-2)
GENDER (PMM-3)
AGE (PMM-3)
GOrd
OrdSet
VNo
VL
GVNo
MALE
FEMALE
GENDER
AGE
ASCENDING ORDER
0->1

FIG.30

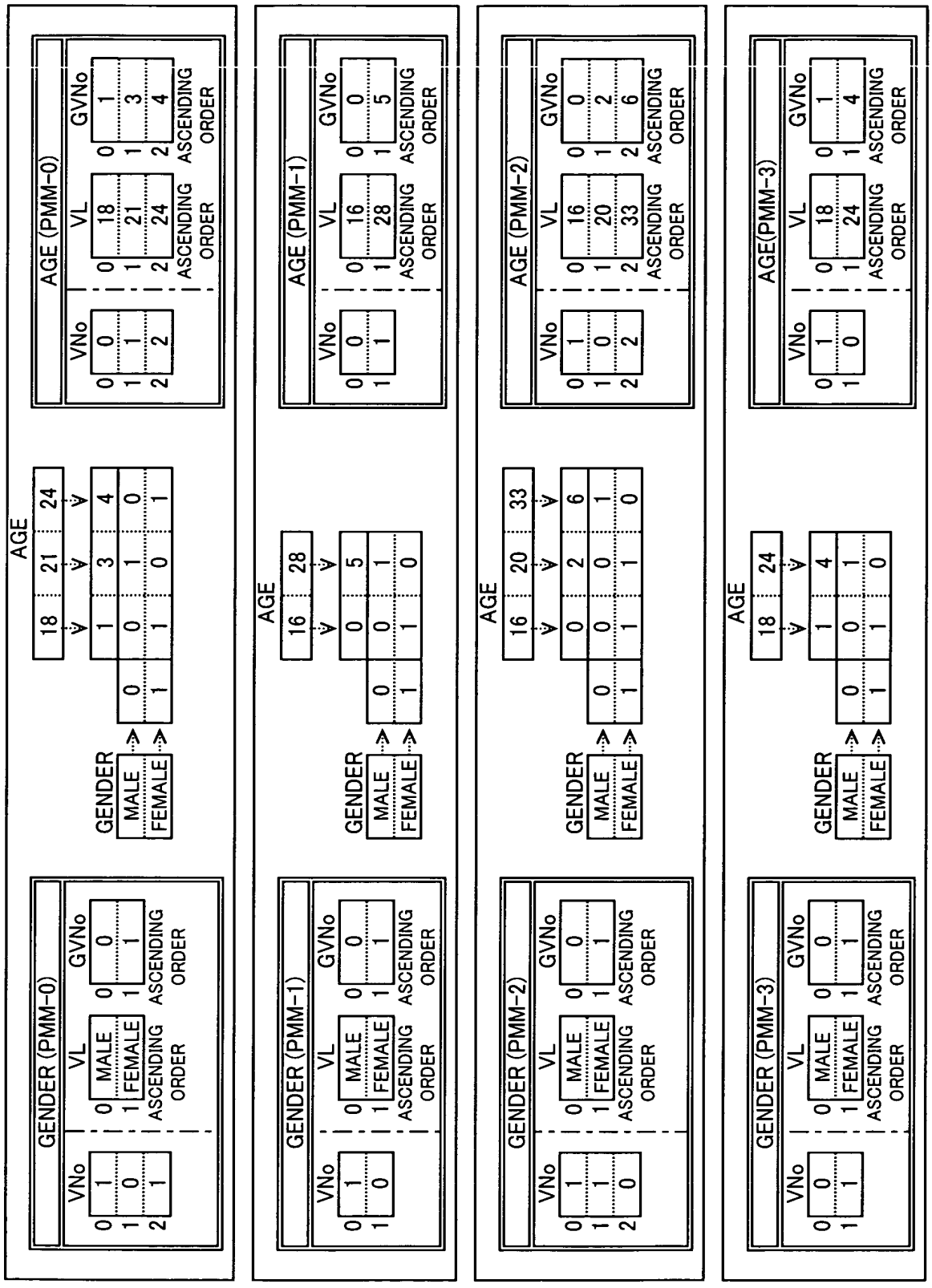

GENDER (PMM-0)
VNo
VL
GVNo
MALE
FEMALE
ASCENDING ORDER
GENDER (PMM-1)
GENDER (PMM-2)
GENDER (PMM-3)
AGE
AGE (PMM-0)
AGE (PMM-1)
AGE (PMM-2)
AGE(PMM-3)
GENDER

FIG.31A

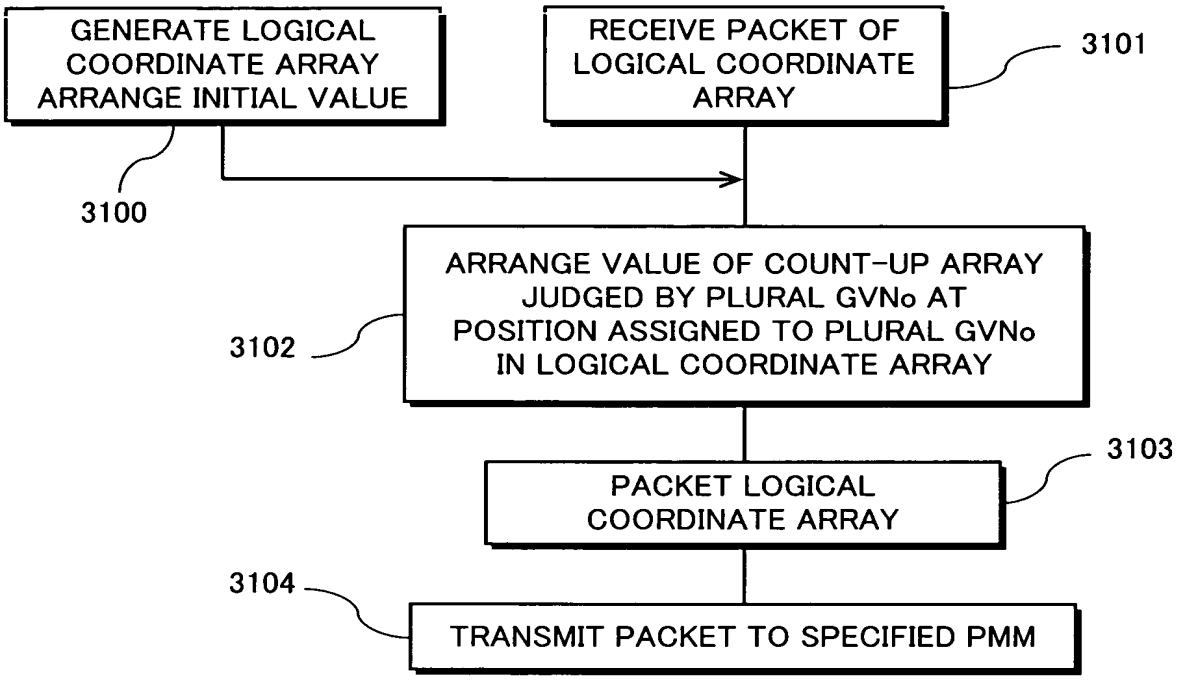


FIG.31B

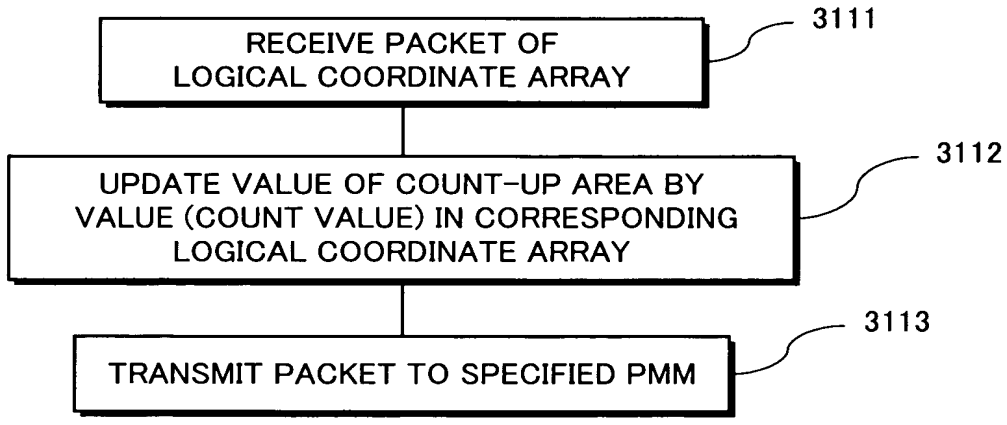


FIG.32

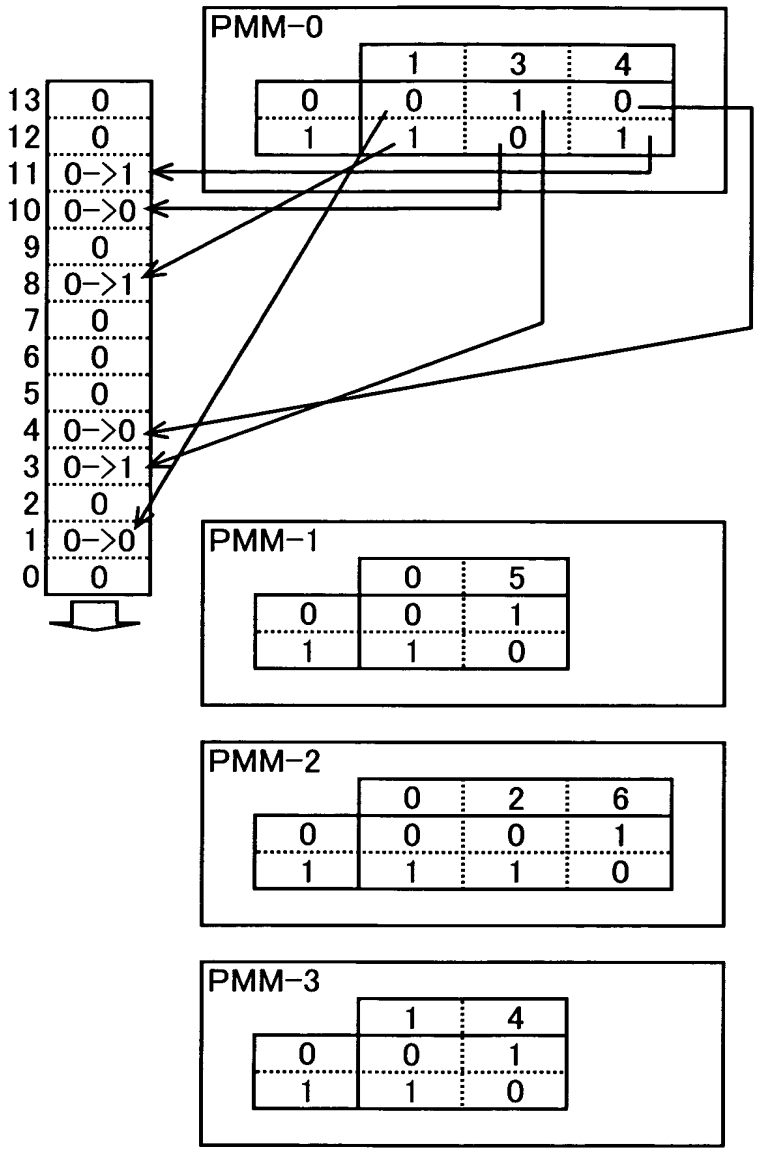

PMM-0
1 3 4
0 0 1 0
1 1 0 1
13 0
12 0
11 0->1
10 0->0
9 0
8 0->1
7 0
6 0
5 0
4 0->0
3 0->1
2 0
1 0->0
0 0
PMM-1
0 5
0 0 1
1 1 0
PMM-2
0 2 6
0 0 0 1
1 1 1 0
PMM-3
1 4
0 0 1
1 1 0

FIG.33

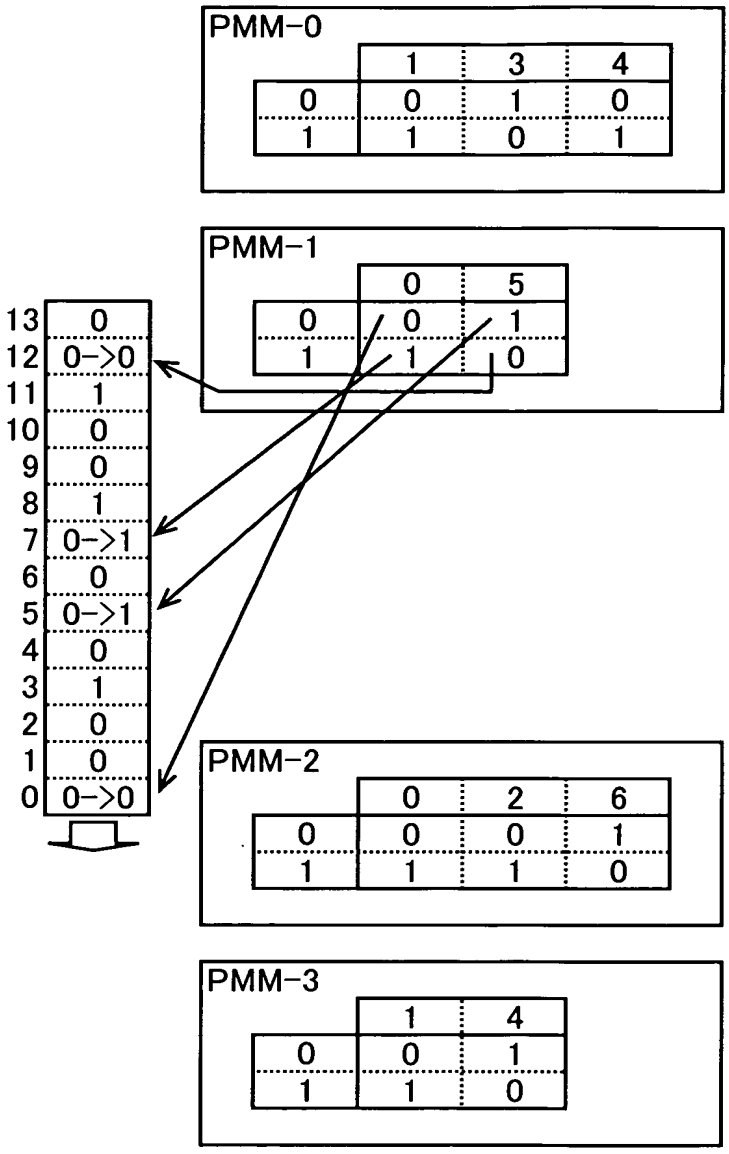

PMM-0
1 3 4
0 0 1 0
1 1 0 1
PMM-1
0 5
0 0 0 1
1 1 1 0
13 0
12 0->0
11 1
10 0
9 0
8 1
7 0->1
6 0
5 0->1
4 0
3 1
2 0
1 0
0 0->0
PMM-2
0 2 6
0 0 0 0 1
1 1 1 1 0
PMM-3
1 4
0 0 0 1
1 1 1 0

FIG.34

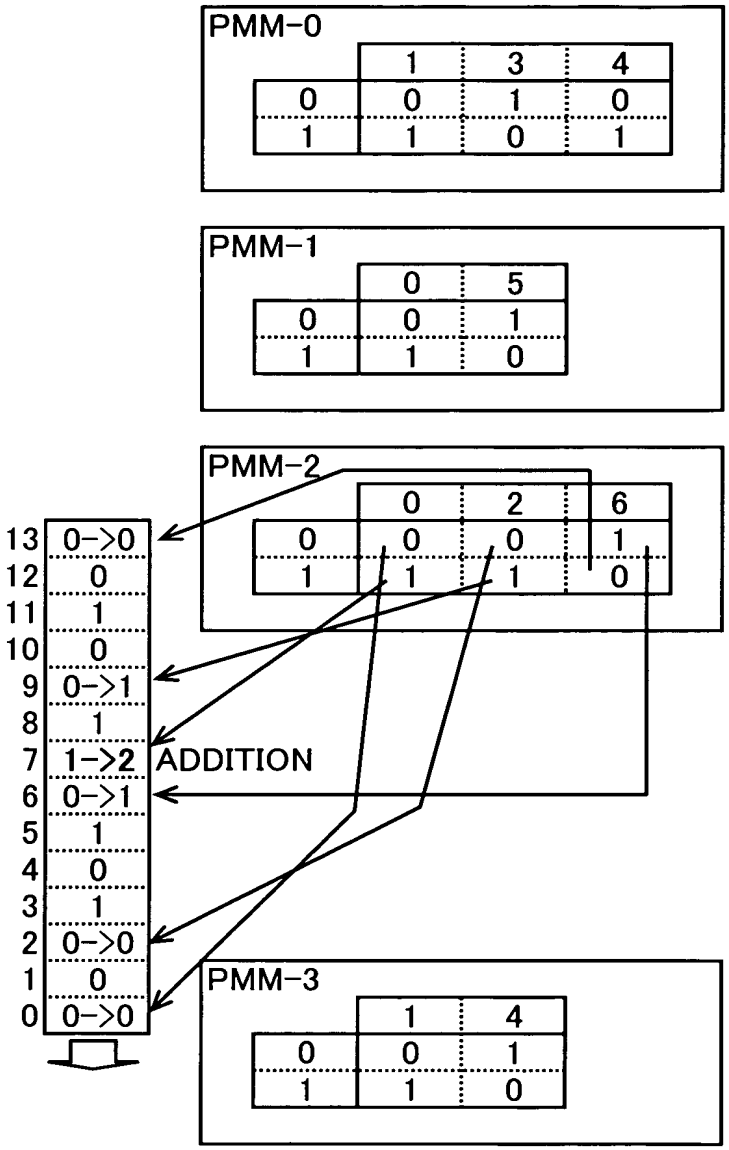

PMM-0
1 3 4
0 0 1 0
1 1 0 1
PMM-1
0 5
0 0 1
1 1 0
PMM-2
0 2 6
0 0 0 1
1 1 1 0
13 0->0
12 0
11 1
10 0
9 0->1
8 1
7 1->2
6 0->1
5 1
4 0
3 1
2 0->0
1 0
0 0->0
ADDITION
PMM-3
1 4
0 0 1
1 1 0

FIG.35

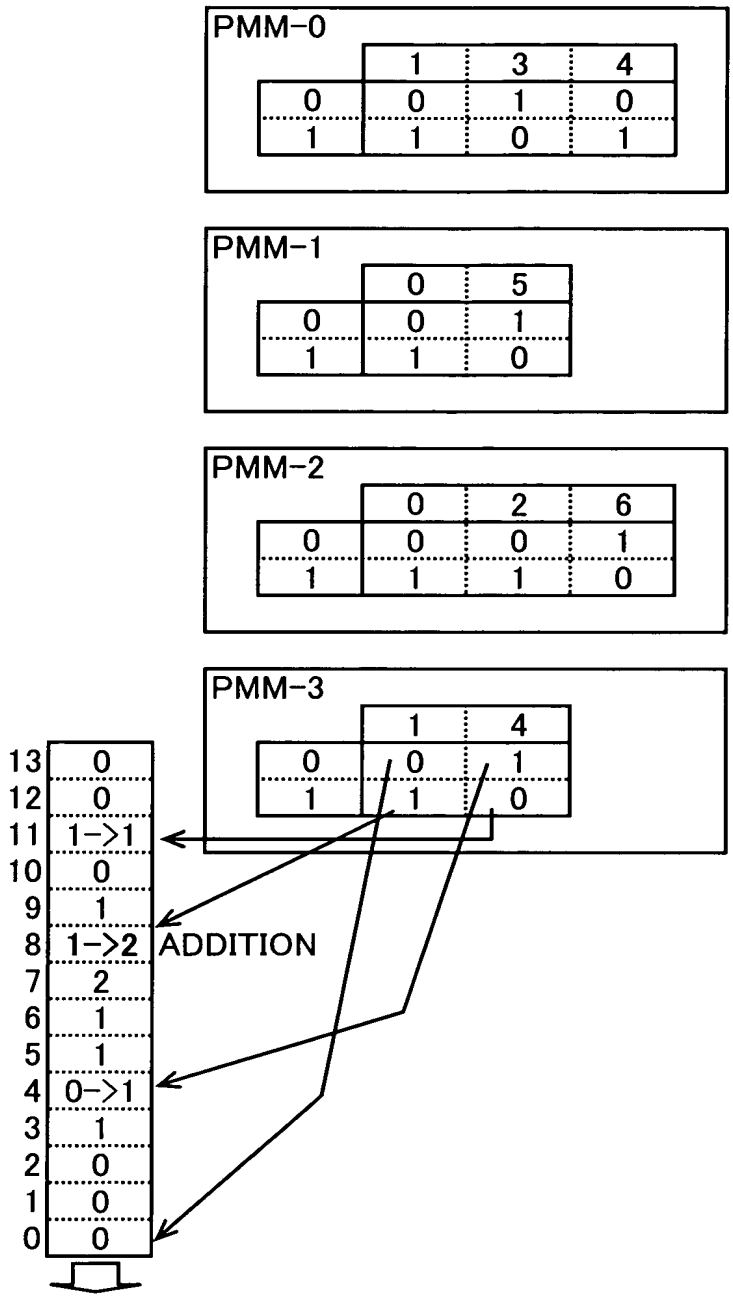

PMM-0
1 3 4
0 0 1 0
1 1 0 1
PMM-1
0 5
0 0 1
1 1 0
PMM-2
0 2 6
0 0 0 1
1 1 1 0
PMM-3
1 4
0 0 1
1 1 0
13 0
12 0
11 1->1
10 0
9 1
8 1->2
7 2
6 1
5 1
4 0->1
3 1
2 0
1 0
0 0
ADDITION

FIG.36

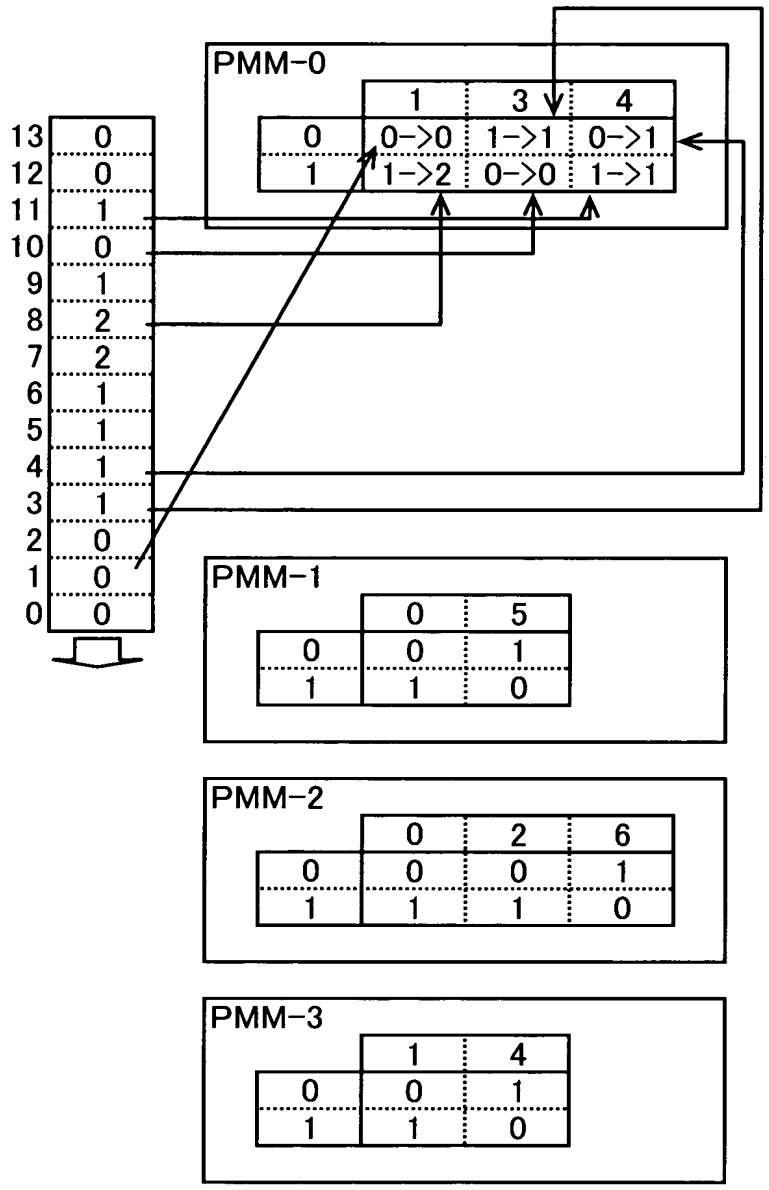


FIG.37

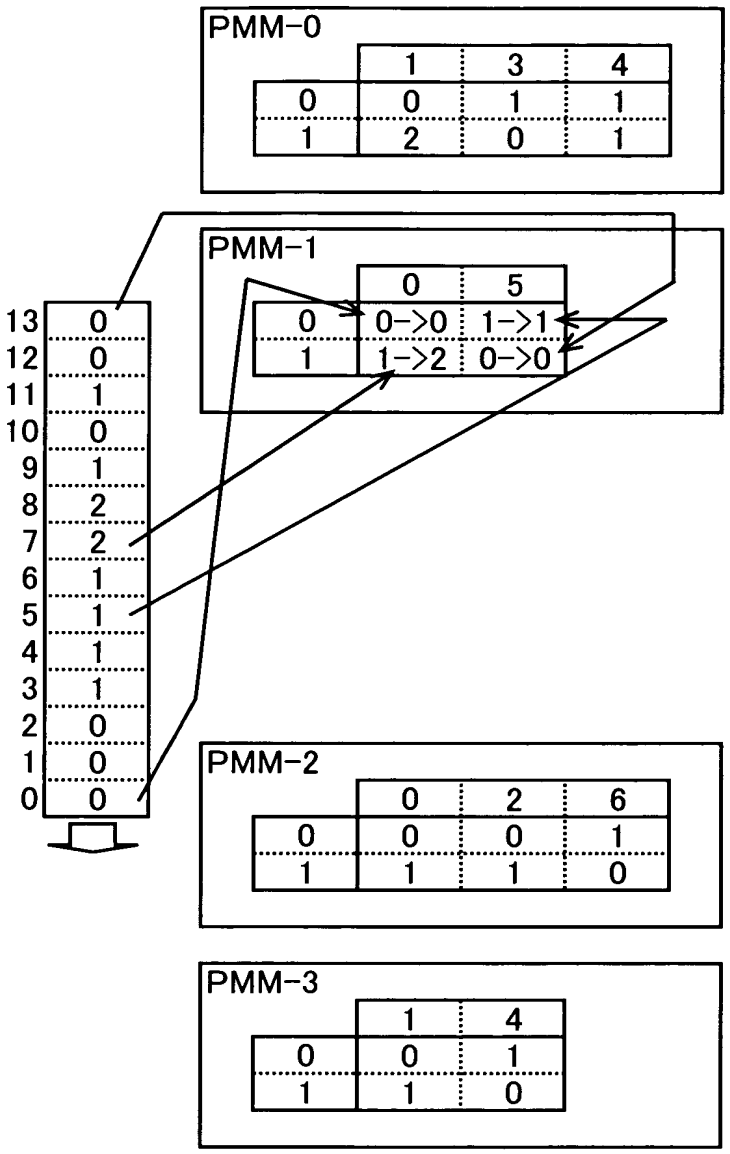

PMM-0
1 3 4
0 0 1 1
1 2 0 1
PMM-1
0 5
0 0->0 1->1
1 1->2 0->0
13 0
12 0
11 1
10 0
9 1
8 2
7 2
6 1
5 1
4 1
3 1
2 0
1 0
0 0
PMM-2
0 2 6
0 0 0 1
1 1 1 0
PMM-3
1 4
0 0 1
1 1 0

FIG.38

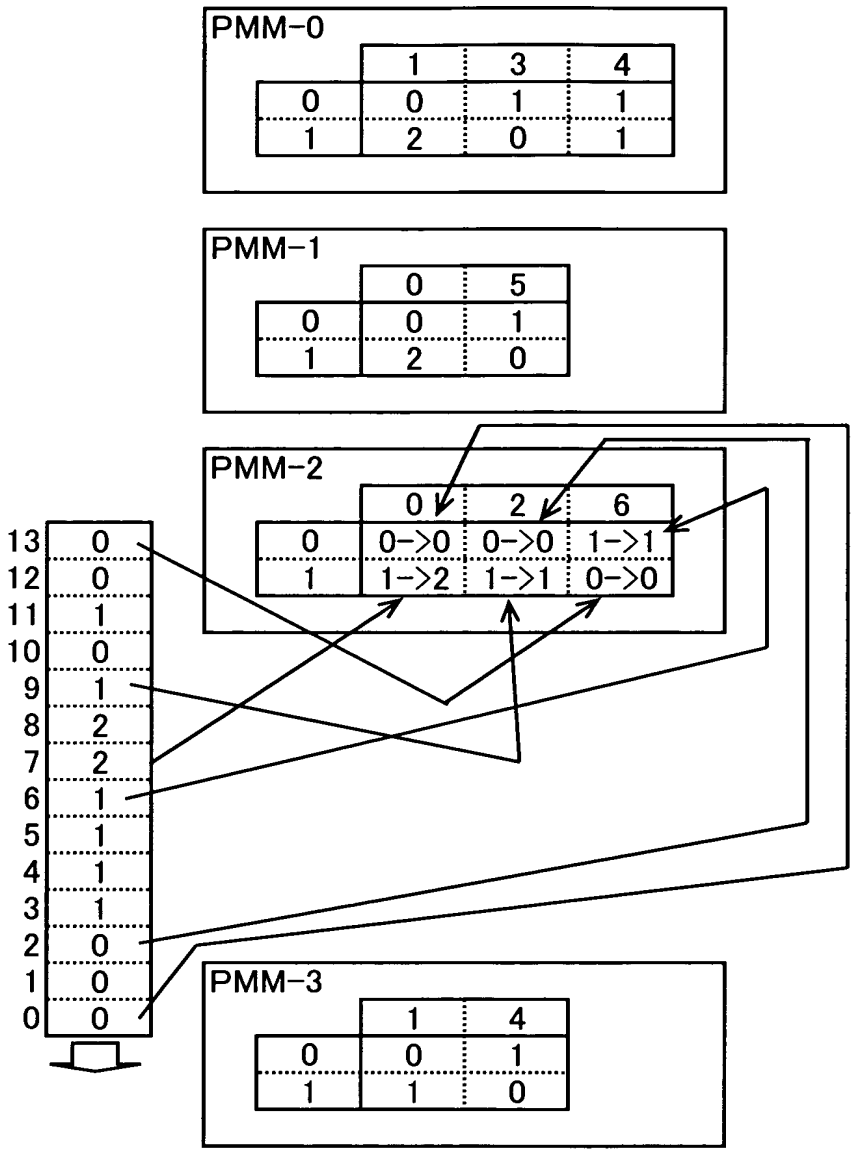

PMM-0
1 3 4
0 0 1 1
1 2 0 1
PMM-1
0 5
0 0 1
1 2 0
PMM-2
0 2 6
0 0->0 0->0 1->1
1 1->2 1->1 0->0
PMM-3
1 4
0 0 1
1 1 0
13 0
12 0
11 1
10 0
9 1
8 2
7 2
6 1
5 1
4 1
3 1
2 0
1 0
0 0

FIG.39

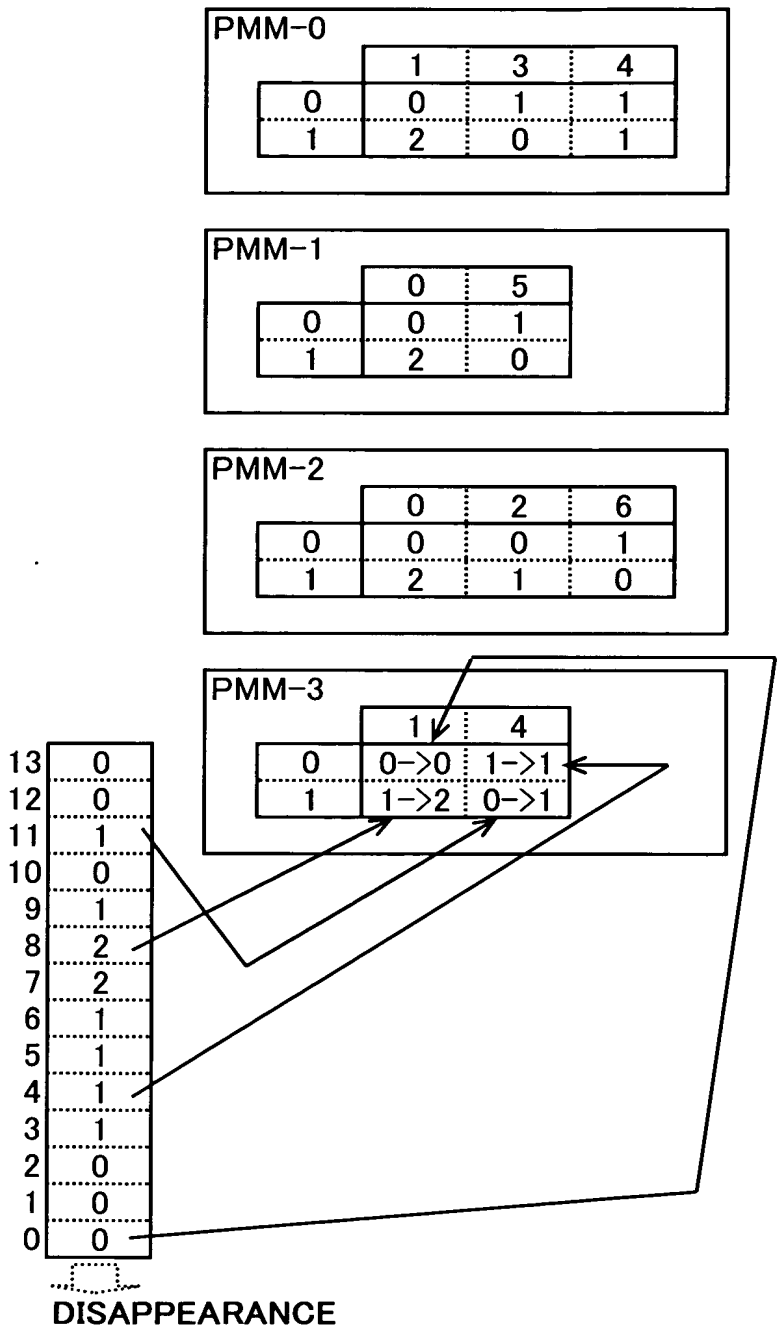

PMM-0
1 3 4
0 0 1 1
1 2 0 1
PMM-1
0 5
0 0 1
1 2 0
PMM-2
0 2 6
0 0 0 1
1 2 1 0
PMM-3
1 4
0 0->0 1->1
1 1->2 0->1
13 0
12 0
11 1
10 0
9 1
8 2
7 2
6 1
5 1
4 1
3 1
2 0
1 0
0 0
DISAPPEARANCE

FIG.40

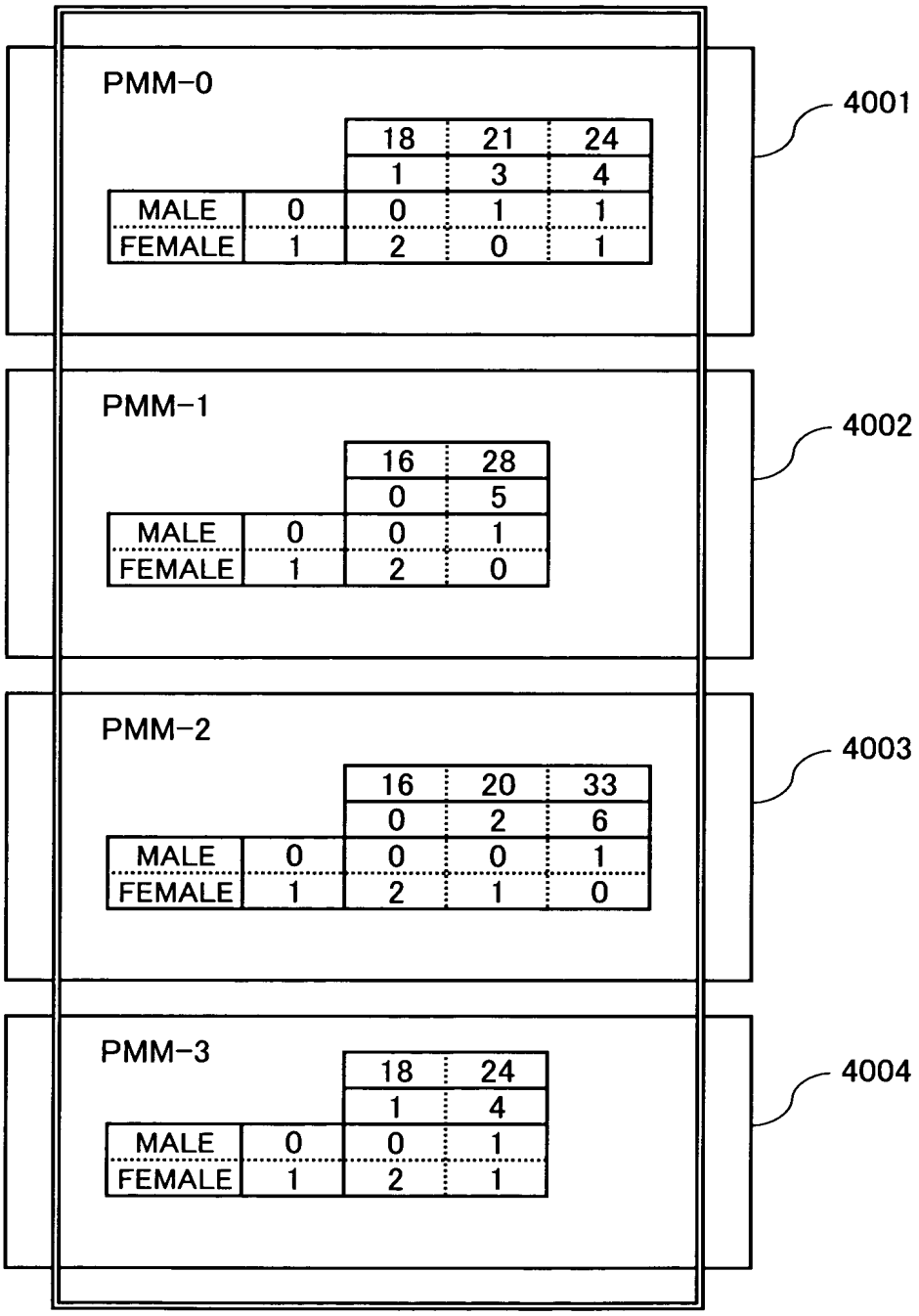

PMM-0
18
21
24
1
3
4
MALE
0
0
1
1
FEMALE
1
2
0
1
4001
PMM-1
16
28
0
5
MALE
0
0
1
FEMALE
1
2
0
4002
PMM-2
16
20
33
0
2
6
MALE
0
0
0
1
FEMALE
1
2
1
0
4003
PMM-3
18
24
1
4
MALE
0
0
1
FEMALE
1
2
1
4004

FIG.41

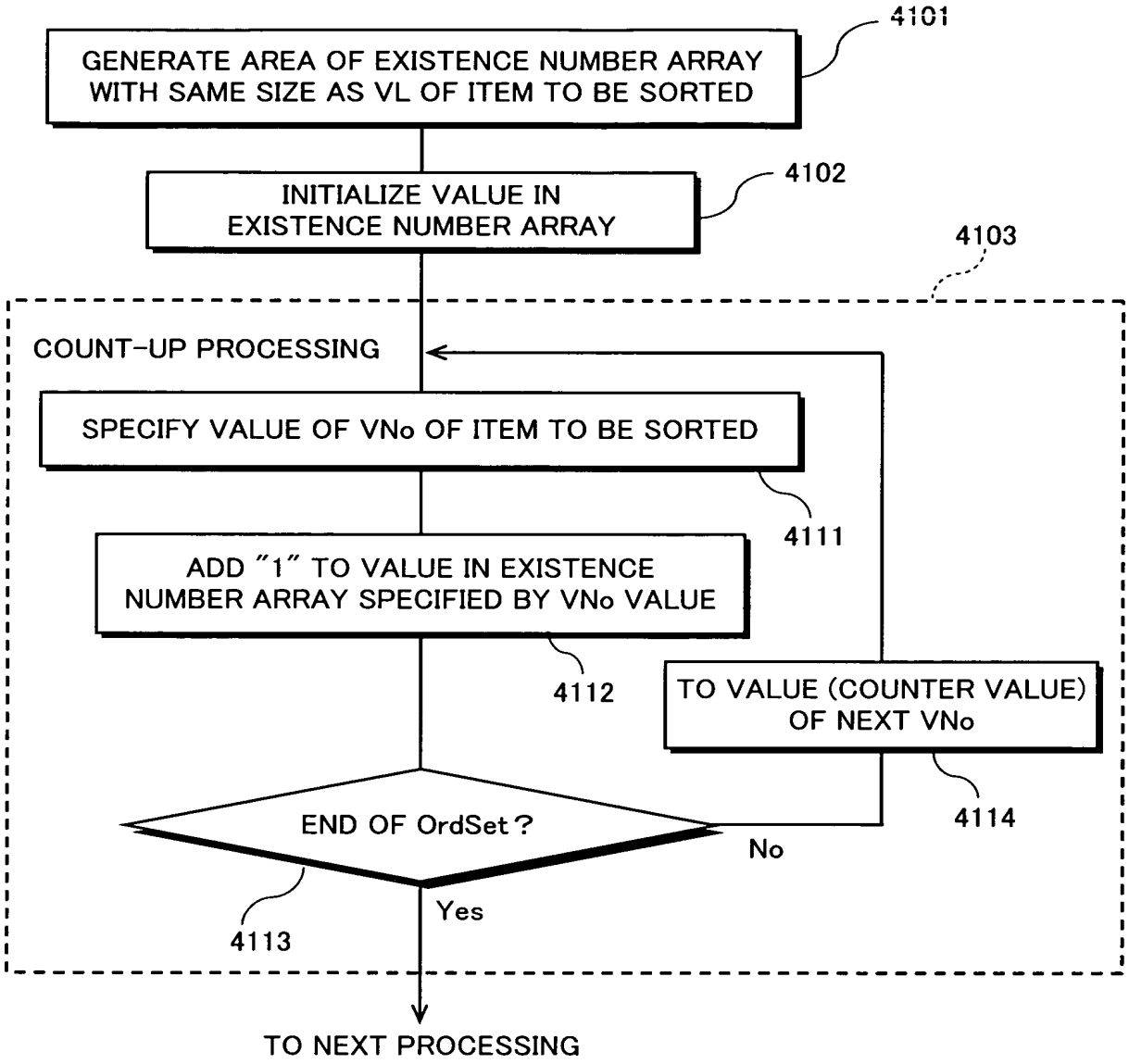

4101
GENERATE AREA OF EXISTENCE NUMBER ARRAY WITH SAME SIZE AS VL OF ITEM TO BE SORTED
4102
INITIALIZE VALUE IN EXISTENCE NUMBER ARRAY
4103
COUNT-UP PROCESSING
SPECIFY VALUE OF VNo OF ITEM TO BE SORTED
4111
ADD "1" TO VALUE IN EXISTENCE NUMBER ARRAY SPECIFIED BY VNo VALUE
4112
TO VALUE (COUNTER VALUE) OF NEXT VNo
4114
END OF OrdSet?
No
Yes
4113
TO NEXT PROCESSING

FIG.42

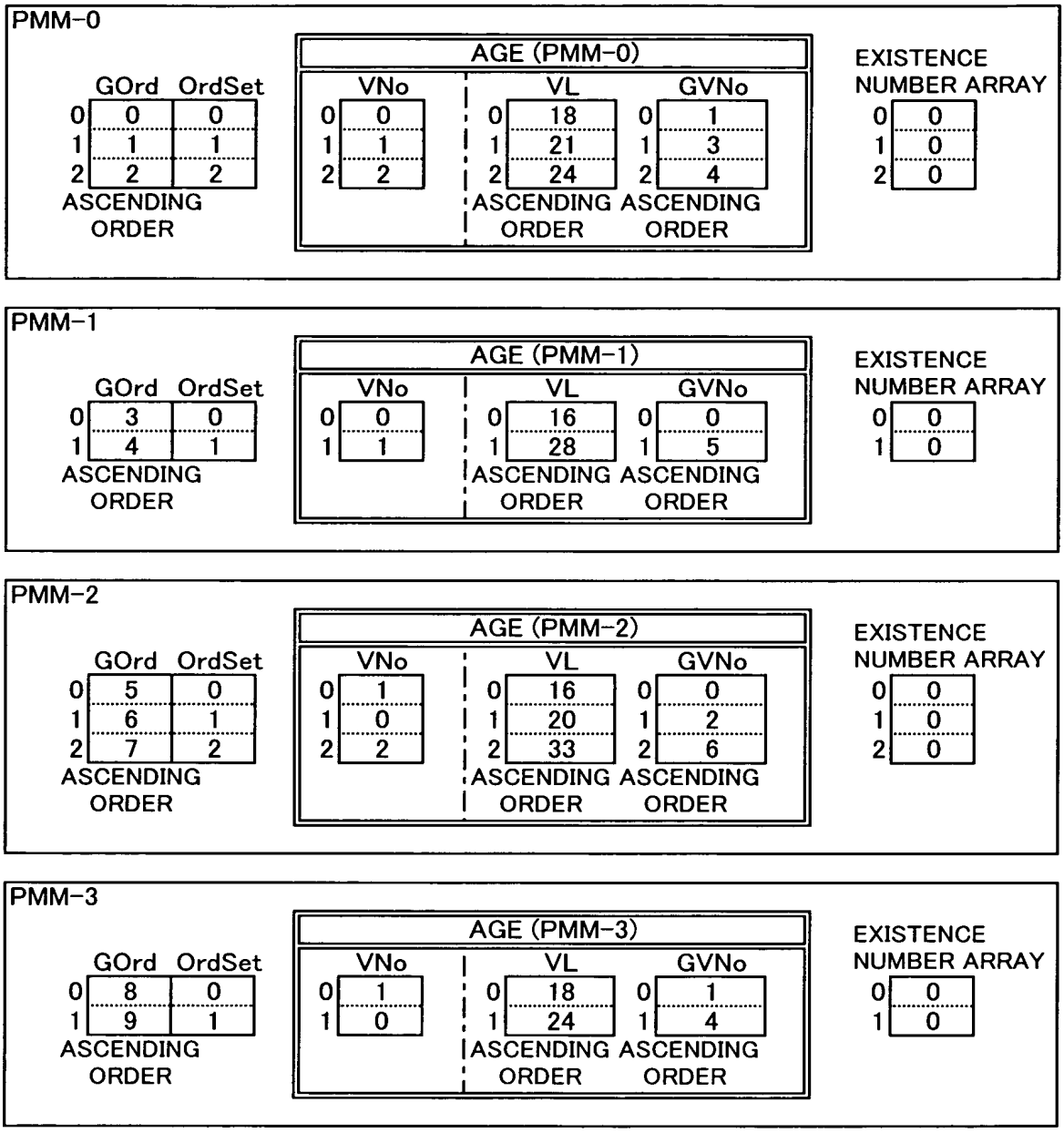

PMM-0
GOrd OrdSet
0 0 0
1 1 1
2 2 2
ASCENDING ORDER
AGE (PMM-0)
VNo
0 0
1 1
2 2
VL
0 18
1 21
2 24
ASCENDING ORDER
GVNo
0 1
1 3
2 4
ASCENDING ORDER
EXISTENCE NUMBER ARRAY
0 0
1 0
2 0
PMM-1
GOrd OrdSet
0 3 0
1 4 1
ASCENDING ORDER
AGE (PMM-1)
VNo
0 0
1 1
VL
0 16
1 28
ASCENDING ORDER
GVNo
0 0
1 5
ASCENDING ORDER
EXISTENCE NUMBER ARRAY
0 0
1 0
PMM-2
GOrd OrdSet
0 5 0
1 6 1
2 7 2
ASCENDING ORDER
AGE (PMM-2)
VNo
0 1
1 0
2 2
VL
0 16
1 20
2 33
ASCENDING ORDER
GVNo
0 0
1 2
2 6
ASCENDING ORDER
EXISTENCE NUMBER ARRAY
0 0
1 0
2 0
PMM-3
GOrd OrdSet
0 8 0
1 9 1
ASCENDING ORDER
AGE (PMM-3)
VNo
0 1
1 0
VL
0 18
1 24
ASCENDING ORDER
GVNo
0 1
1 4
ASCENDING ORDER
EXISTENCE NUMBER ARRAY
0 0
1 0

FIG.43

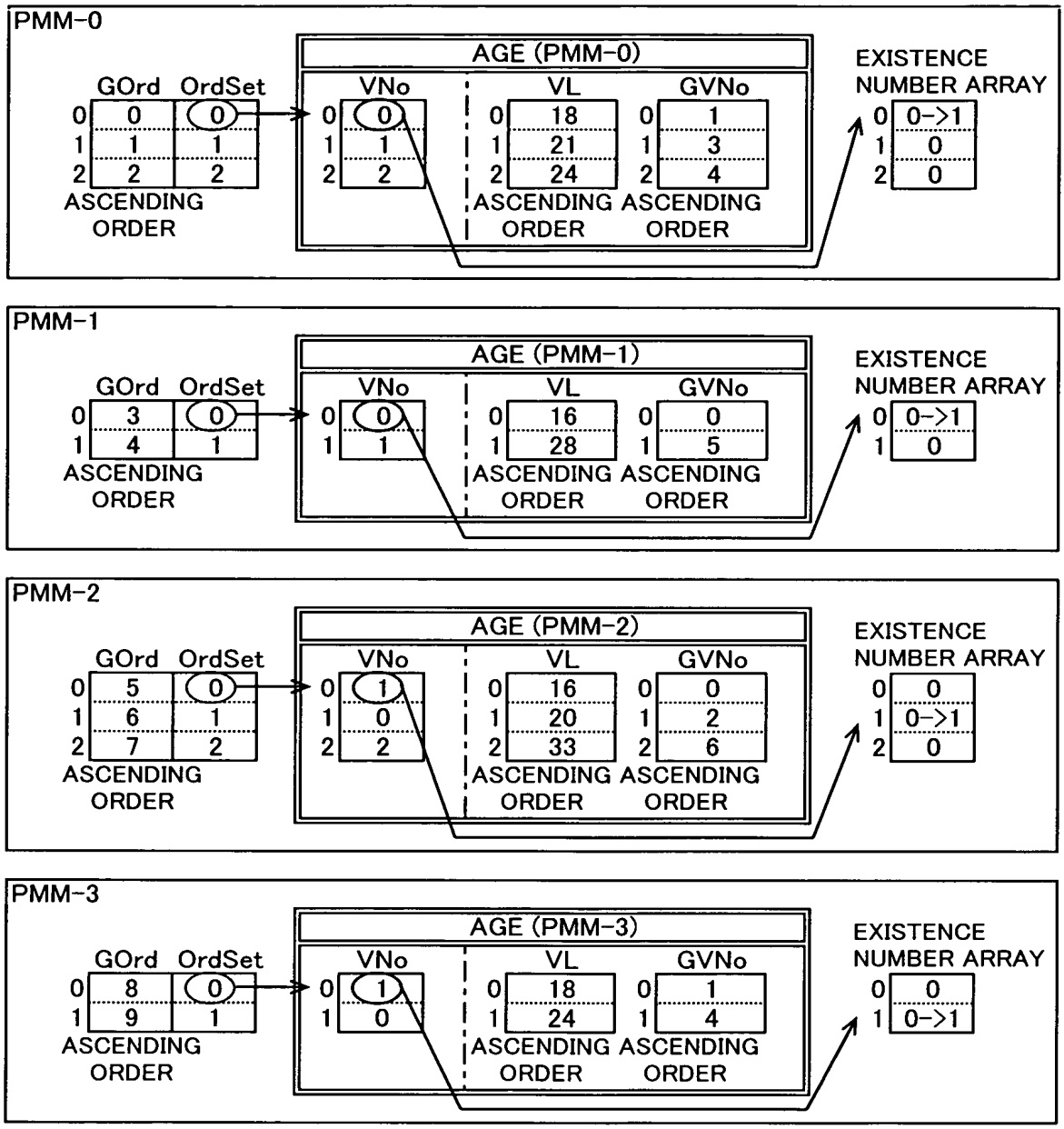

PMM-0
GOrd
OrdSet
ASCENDING ORDER
AGE (PMM-0)
VNo
VL
GVNo
ASCENDING ORDER
ASCENDING ORDER
EXISTENCE NUMBER ARRAY
0->1
PMM-1
AGE (PMM-1)
PMM-2
AGE (PMM-2)
PMM-3
AGE (PMM-3)

FIG.44

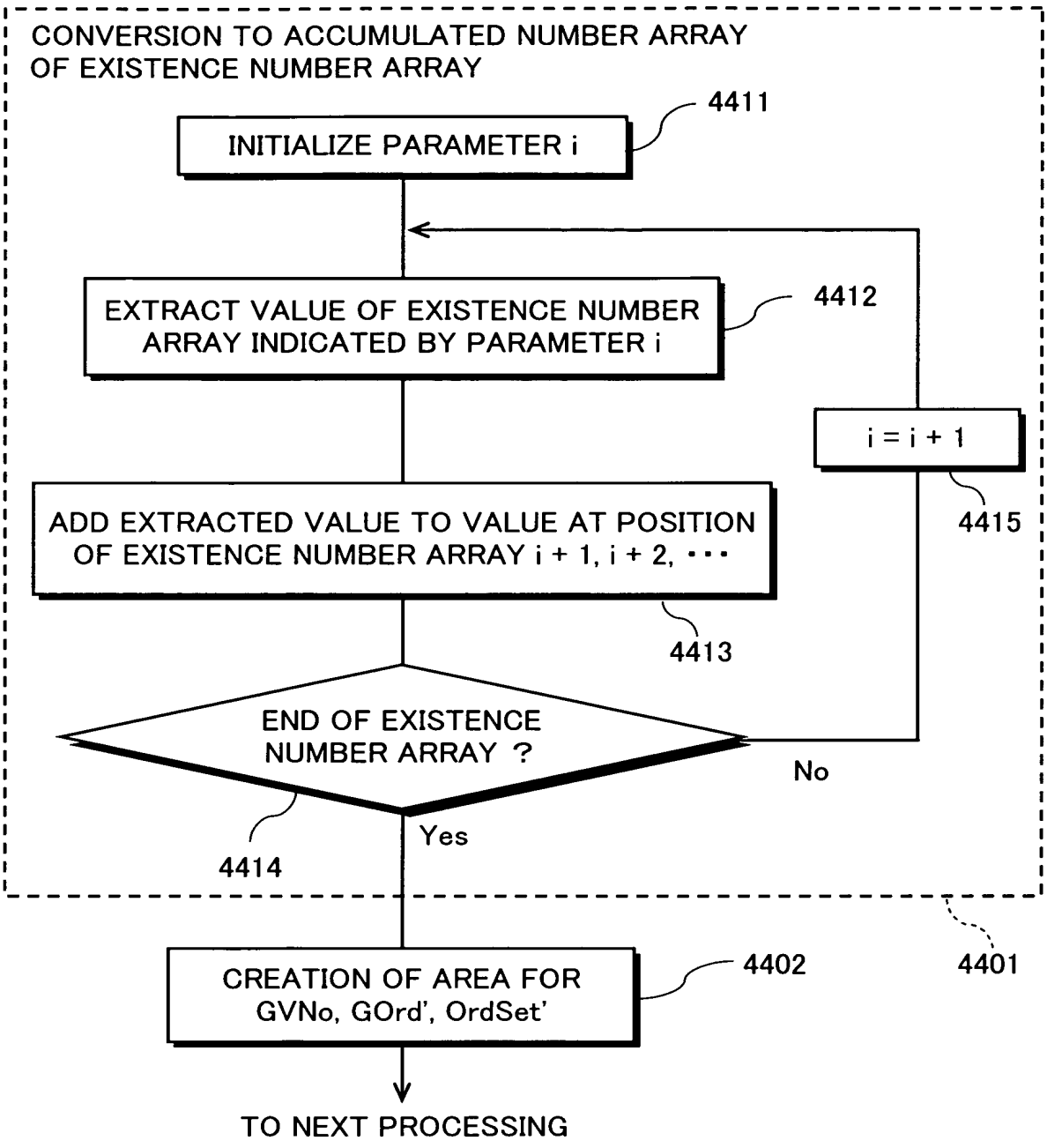

CONVERSION TO ACCUMULATED NUMBER ARRAY OF EXISTENCE NUMBER ARRAY
INITIALIZE PARAMETER i
4411
EXTRACT VALUE OF EXISTENCE NUMBER ARRAY INDICATED BY PARAMETER i
4412
i = i + 1
4415
ADD EXTRACTED VALUE TO VALUE AT POSITION OF EXISTENCE NUMBER ARRAY i + 1, i + 2, ・・・
4413
END OF EXISTENCE NUMBER ARRAY ?
No
Yes
4414
4401
CREATION OF AREA FOR GVNo, GOrd', OrdSet'
4402
TO NEXT PROCESSING

FIG.45

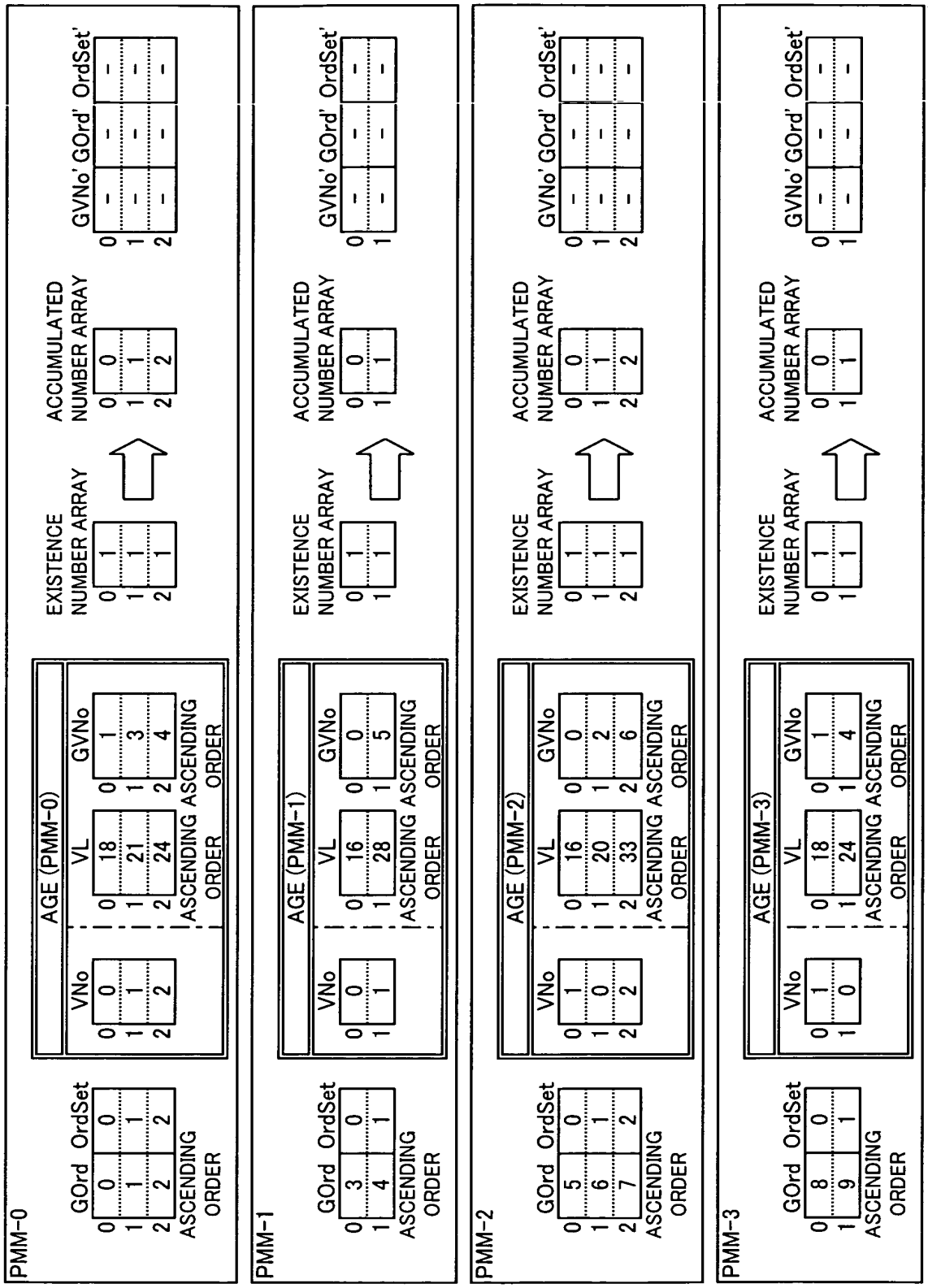

PMM-0
AGE (PMM-0)
VNo
VL
GVNo
ASCENDING ORDER
ASCENDING ORDER
EXISTENCE NUMBER ARRAY
ACCUMULATED NUMBER ARRAY
GVNo' GOrd' OrdSet'
GOrd OrdSet
ASCENDING ORDER
PMM-1
AGE (PMM-1)
PMM-2
AGE (PMM-2)
PMM-3
AGE (PMM-3)

FIG.46

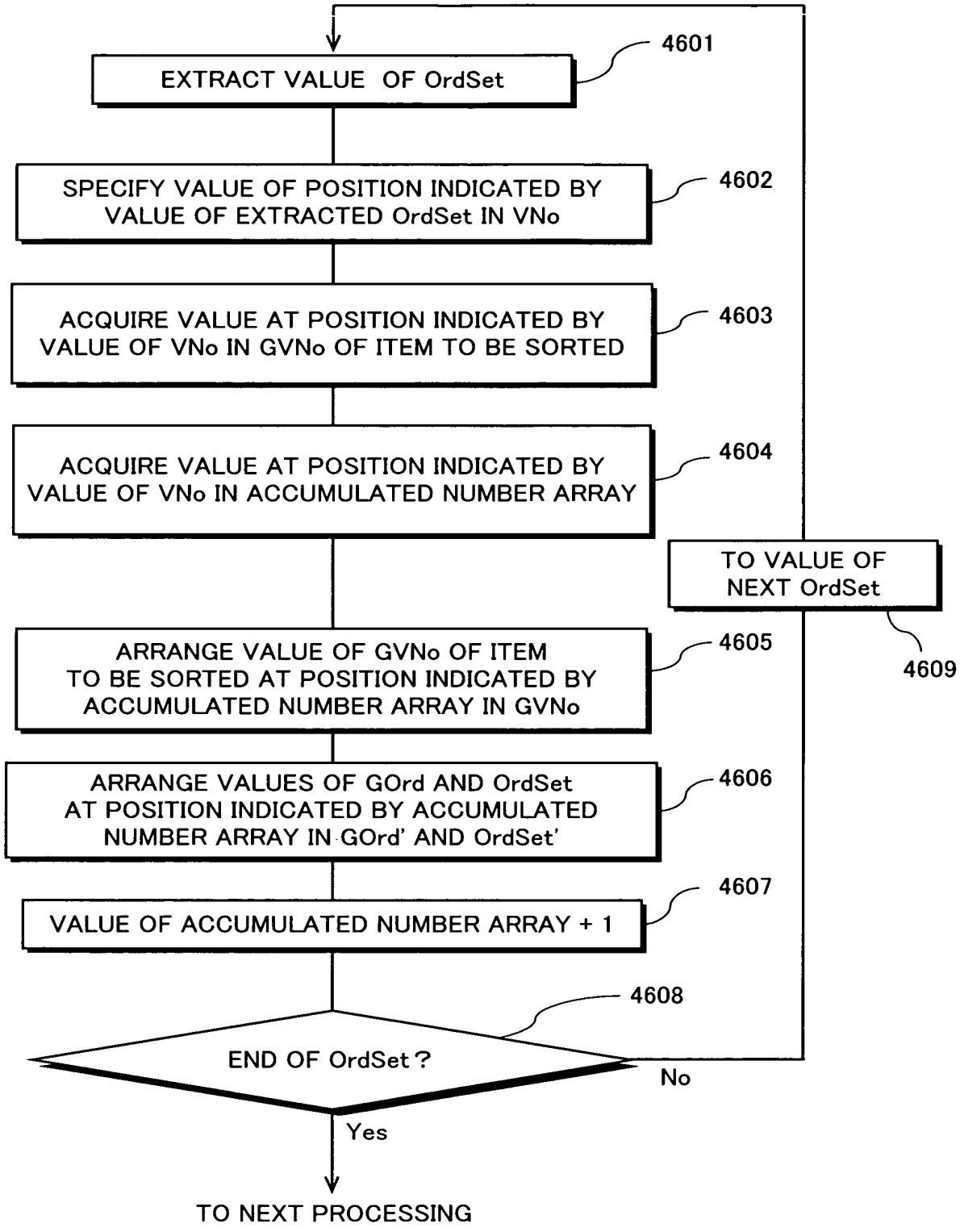

EXTRACT VALUE OF OrdSet
4601
SPECIFY VALUE OF POSITION INDICATED BY VALUE OF EXTRACTED OrdSet IN VNo
4602
ACQUIRE VALUE AT POSITION INDICATED BY VALUE OF VNo IN GVNo OF ITEM TO BE SORTED
4603
ACQUIRE VALUE AT POSITION INDICATED BY VALUE OF VNo IN ACCUMULATED NUMBER ARRAY
4604
TO VALUE OF NEXT OrdSet
4609
ARRANGE VALUE OF GVNo OF ITEM TO BE SORTED AT POSITION INDICATED BY ACCUMULATED NUMBER ARRAY IN GVNo
4605
ARRANGE VALUES OF GOrd AND OrdSet AT POSITION INDICATED BY ACCUMULATED NUMBER ARRAY IN GOrd' AND OrdSet'
4606
VALUE OF ACCUMULATED NUMBER ARRAY + 1
4607
END OF OrdSet?
4608
No
Yes
TO NEXT PROCESSING

FIG.47

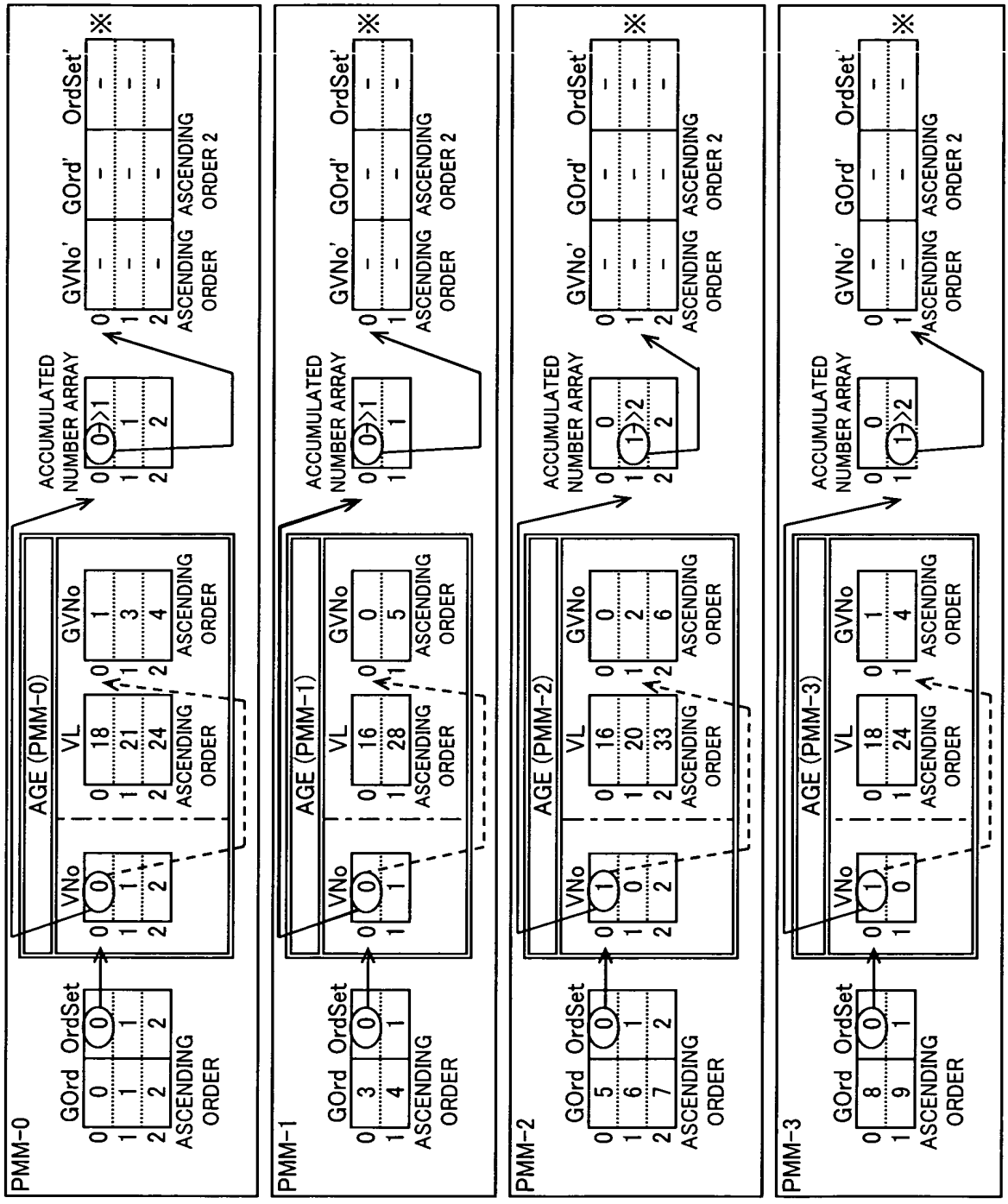

PMM-0
PMM-1
PMM-2
PMM-3
AGE (PMM-0)
AGE (PMM-1)
AGE (PMM-2)
AGE (PMM-3)
GOrd
OrdSet
VNo
VL
GVNo
ACCUMULATED NUMBER ARRAY
GVNo'
GOrd'
OrdSet'
ASCENDING ORDER
ASCENDING ORDER 2

FIG.48

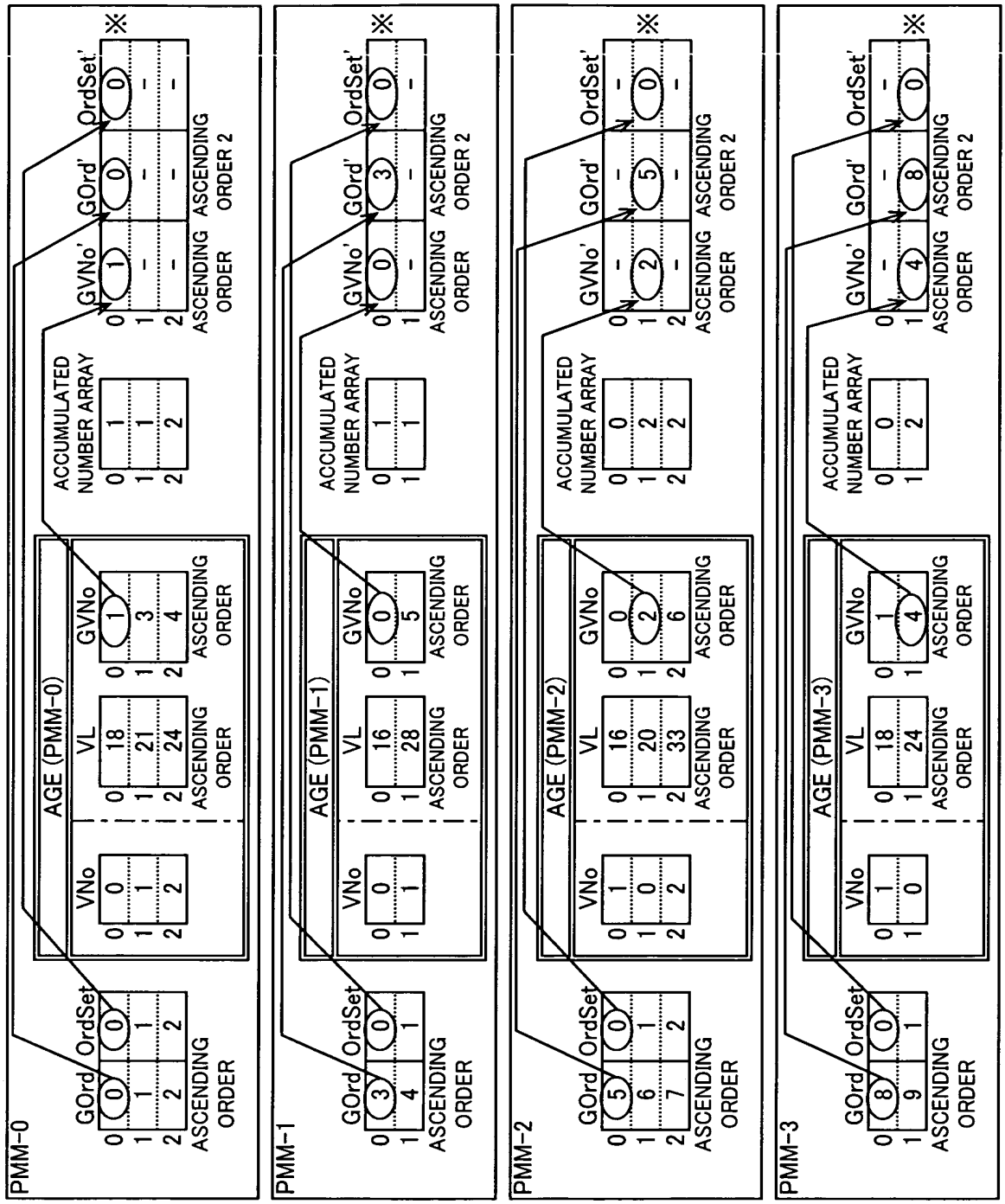

PMM-0
PMM-1
PMM-2
PMM-3
AGE (PMM-0)
AGE (PMM-1)
AGE (PMM-2)
AGE (PMM-3)
VNo
VL
GVNo
ACCUMULATED NUMBER ARRAY
GVNo'
GOrd'
OrdSet'
GOrd
OrdSet
ASCENDING ORDER
ASCENDING ORDER 2
※

FIG.49

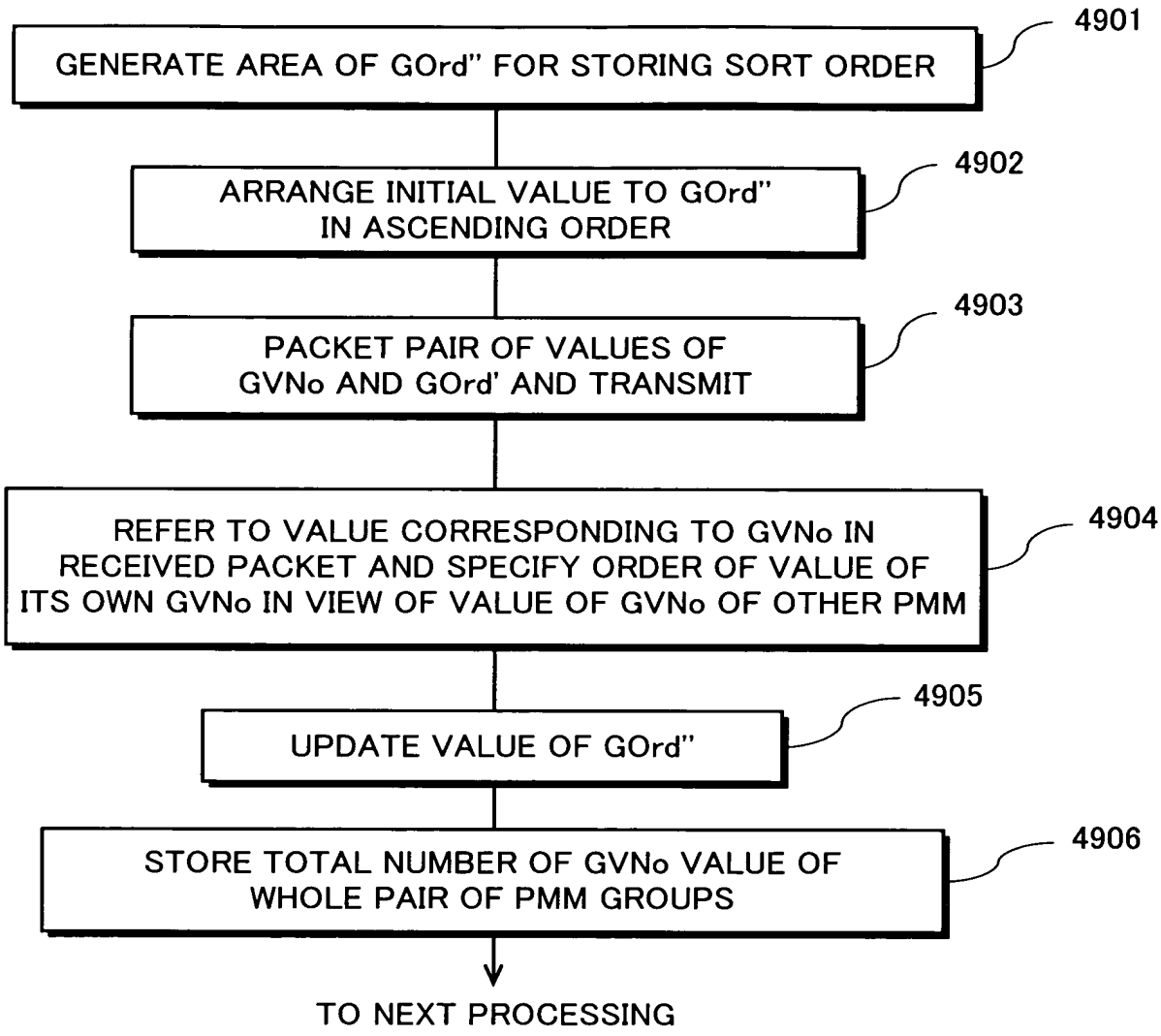

GENERATE AREA OF GOrd" FOR STORING SORT ORDER
4901
ARRANGE INITIAL VALUE TO GOrd" IN ASCENDING ORDER
4902
PACKET PAIR OF VALUES OF GVNo AND GOrd' AND TRANSMIT
4903
REFER TO VALUE CORRESPONDING TO GVNo IN RECEIVED PACKET AND SPECIFY ORDER OF VALUE OF ITS OWN GVNo IN VIEW OF VALUE OF GVNo OF OTHER PMM
4904
UPDATE VALUE OF GOrd"
4905
STORE TOTAL NUMBER OF GVNo VALUE OF WHOLE PAIR OF PMM GROUPS
4906
TO NEXT PROCESSING

FIG.50

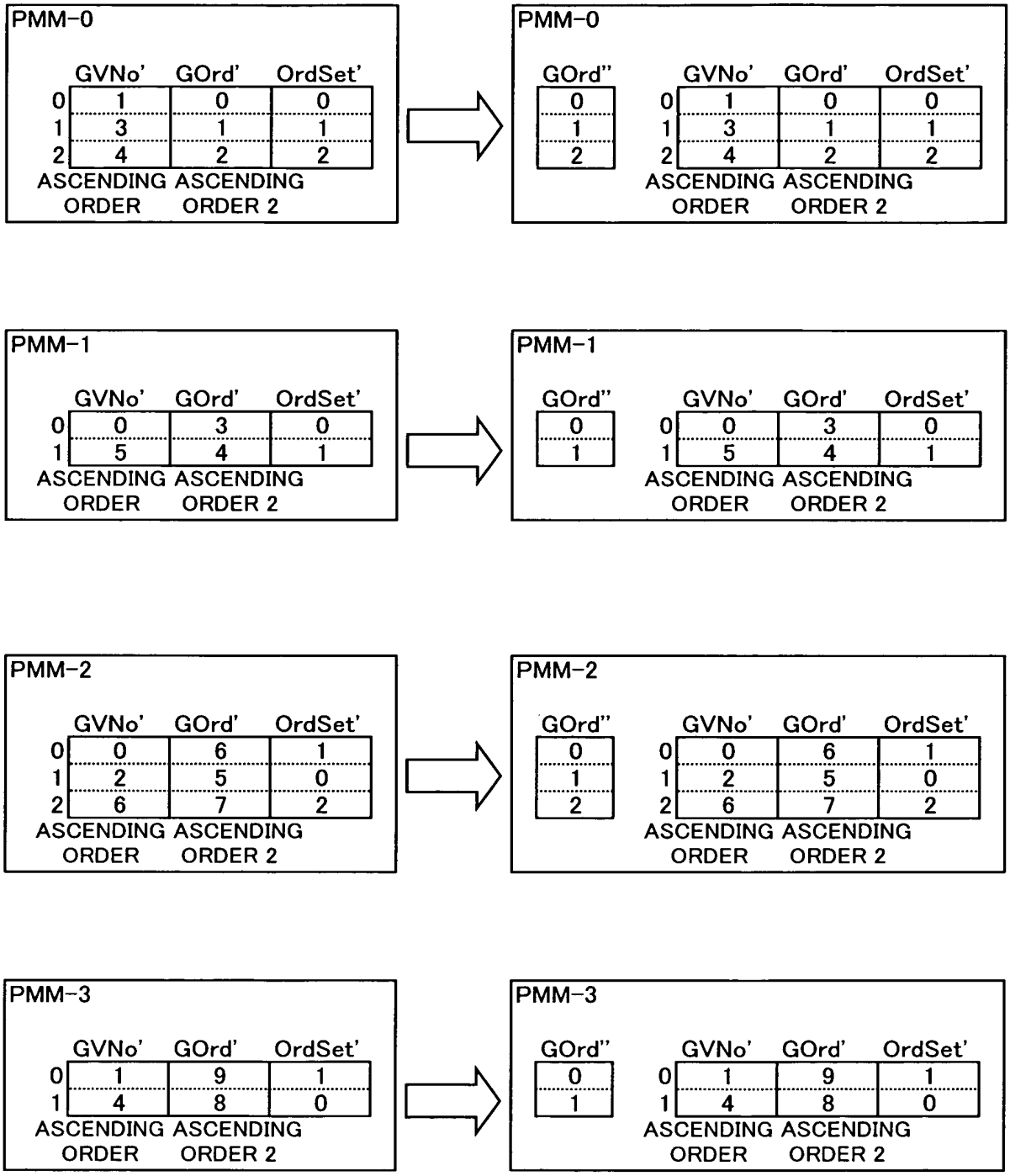

PMM-0
GVNo' GOrd' OrdSet'
0 1 0 0
1 3 1 1
2 4 2 2
ASCENDING ORDER
ASCENDING ORDER 2
PMM-0
GOrd''
0
1
2
GVNo' GOrd' OrdSet'
0 1 0 0
1 3 1 1
2 4 2 2
ASCENDING ORDER
ASCENDING ORDER 2
PMM-1
GVNo' GOrd' OrdSet'
0 0 3 0
1 5 4 1
ASCENDING ORDER
ASCENDING ORDER 2
PMM-1
GOrd''
0
1
GVNo' GOrd' OrdSet'
0 0 3 0
1 5 4 1
ASCENDING ORDER
ASCENDING ORDER 2
PMM-2
GVNo' GOrd' OrdSet'
0 0 6 1
1 2 5 0
2 6 7 2
ASCENDING ORDER
ASCENDING ORDER 2
PMM-2
GOrd''
0
1
2
GVNo' GOrd' OrdSet'
0 0 6 1
1 2 5 0
2 6 7 2
ASCENDING ORDER
ASCENDING ORDER 2
PMM-3
GVNo' GOrd' OrdSet'
0 1 9 1
1 4 8 0
ASCENDING ORDER
ASCENDING ORDER 2
PMM-3
GOrd''
0
1
GVNo' GOrd' OrdSet'
0 1 9 1
1 4 8 0
ASCENDING ORDER
ASCENDING ORDER 2

FIG.51

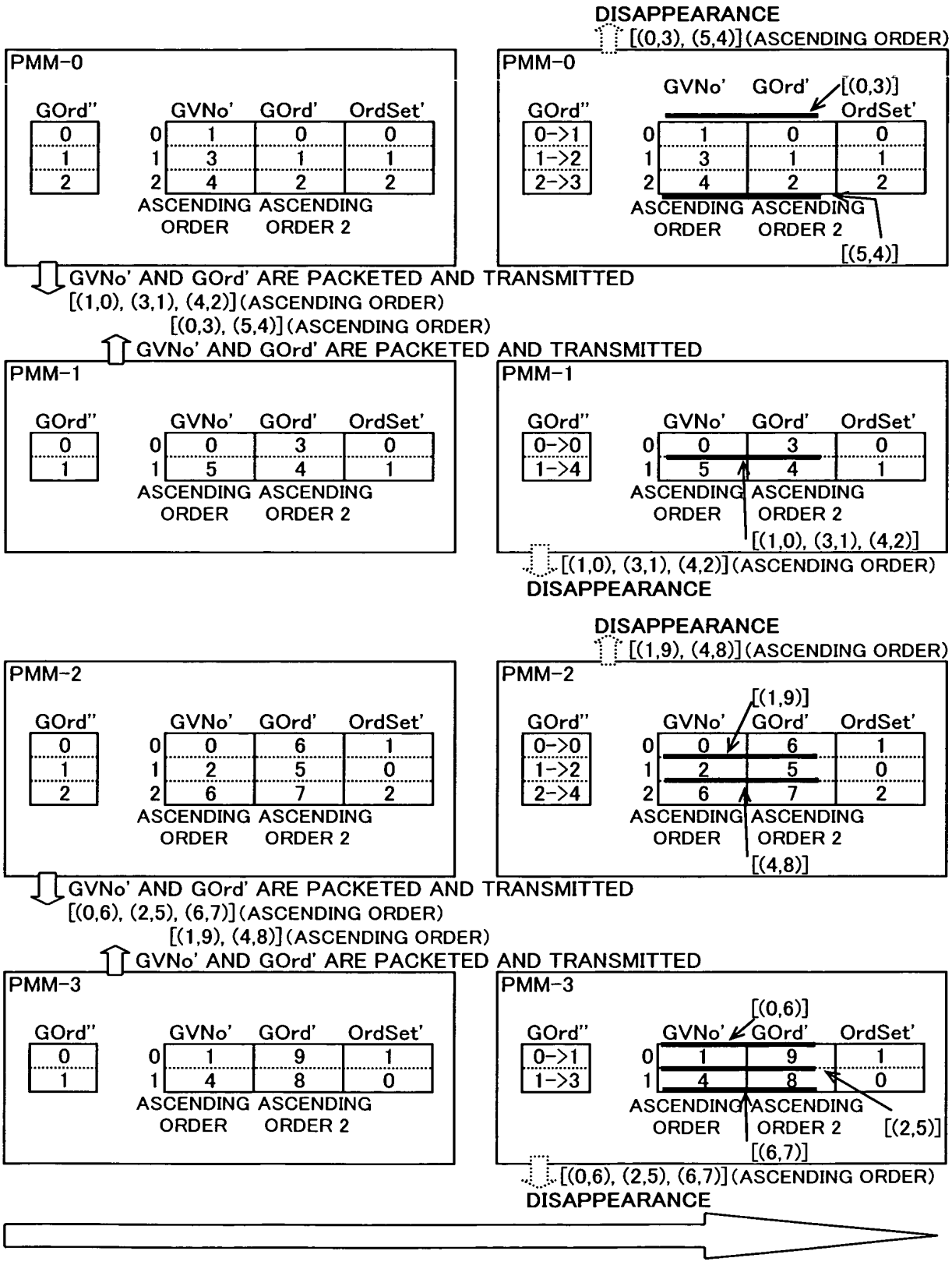

PMM-0
GOrd''
GVNo'
GOrd'
OrdSet'
ASCENDING ORDER
ASCENDING ORDER 2
GVNo' AND GOrd' ARE PACKETED AND TRANSMITTED
[(1,0), (3,1), (4,2)](ASCENDING ORDER)
[(0,3), (5,4)](ASCENDING ORDER)
DISAPPEARANCE
[(0,3)]
[(5,4)]
PMM-1
[(1,0), (3,1), (4,2)]
PMM-2
[(1,9)]
[(4,8)]
PMM-3
[(0,6)]
[(2,5)]
[(6,7)]

FIG.52A

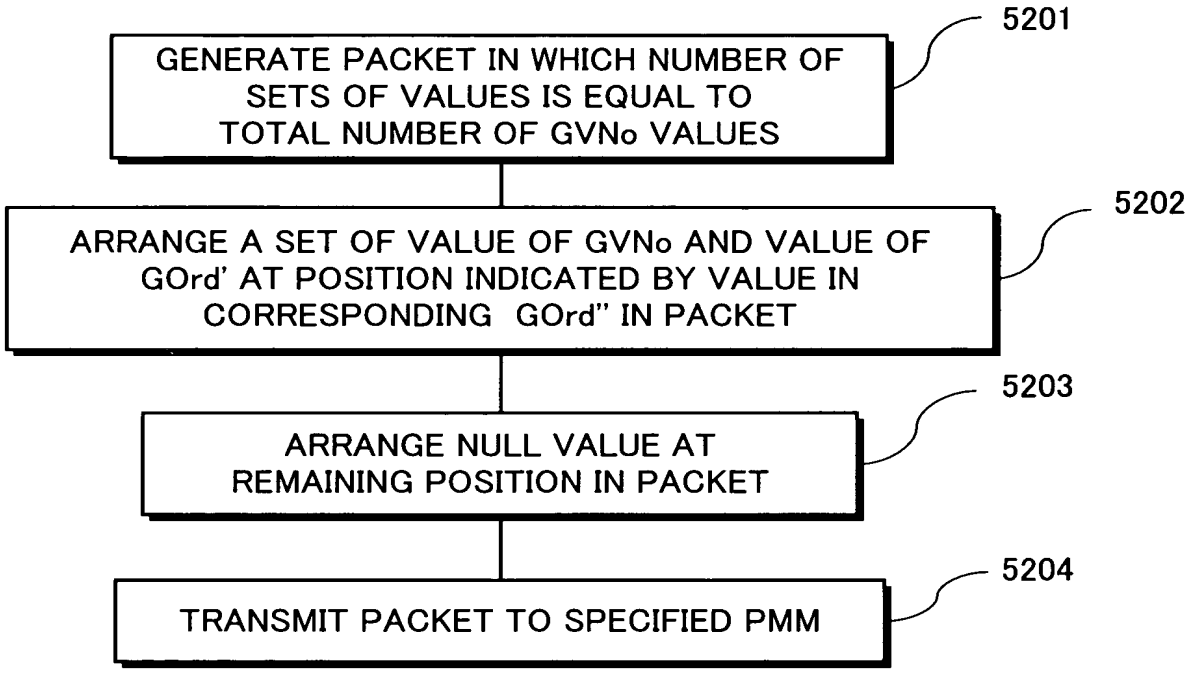


FIG.52B

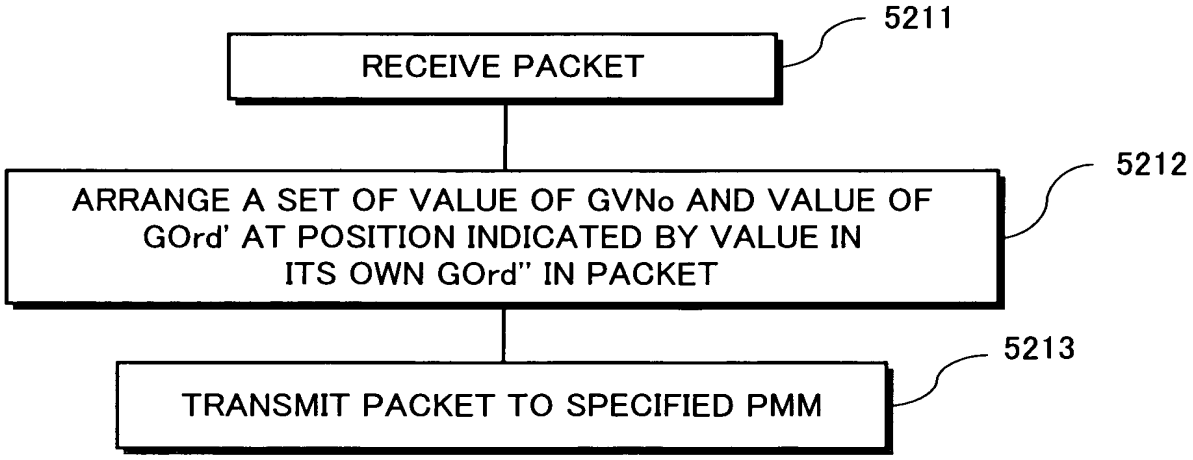


FIG.53

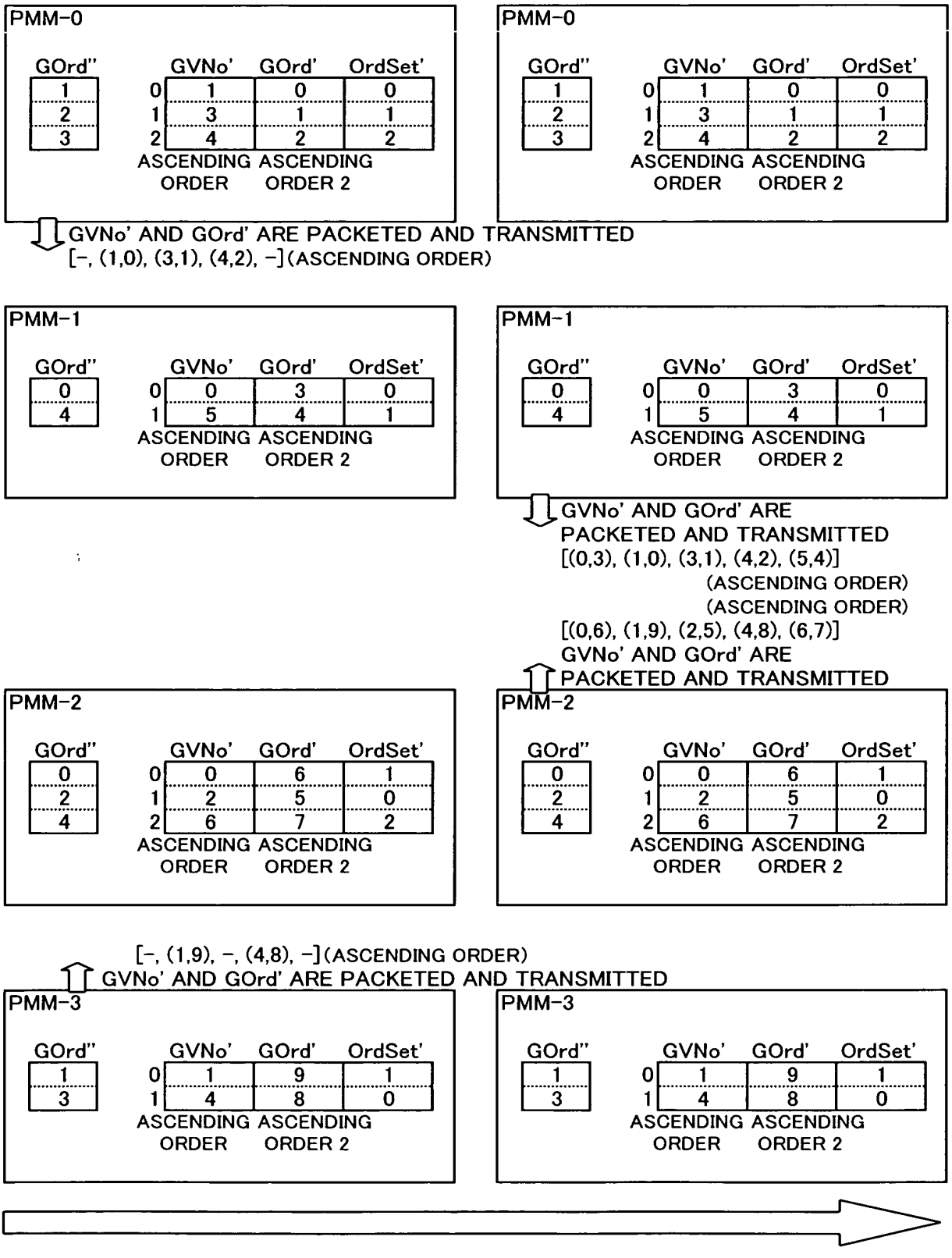

PMM-0
GOrd"
GVNo'
GOrd'
OrdSet'
ASCENDING ORDER
ASCENDING ORDER 2
GVNo' AND GOrd' ARE PACKETED AND TRANSMITTED
[-, (1,0), (3,1), (4,2), -](ASCENDING ORDER)
PMM-1
GVNo' AND GOrd' ARE PACKETED AND TRANSMITTED
[(0,3), (1,0), (3,1), (4,2), (5,4)]
(ASCENDING ORDER)
(ASCENDING ORDER)
[(0,6), (1,9), (2,5), (4,8), (6,7)]
GVNo' AND GOrd' ARE PACKETED AND TRANSMITTED
PMM-2
[-, (1,9), -, (4,8), -](ASCENDING ORDER)
GVNo' AND GOrd' ARE PACKETED AND TRANSMITTED
PMM-3

FIG.54

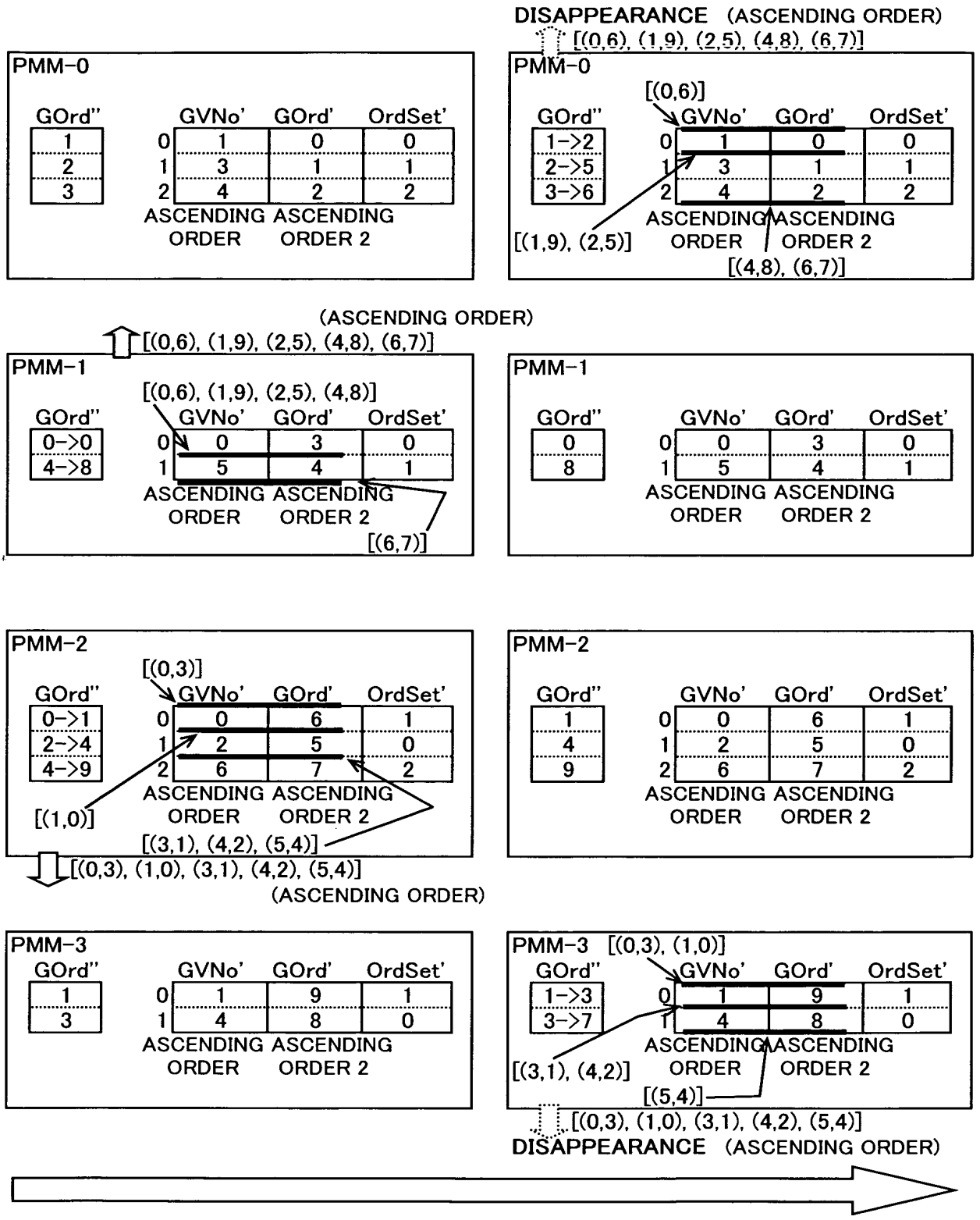
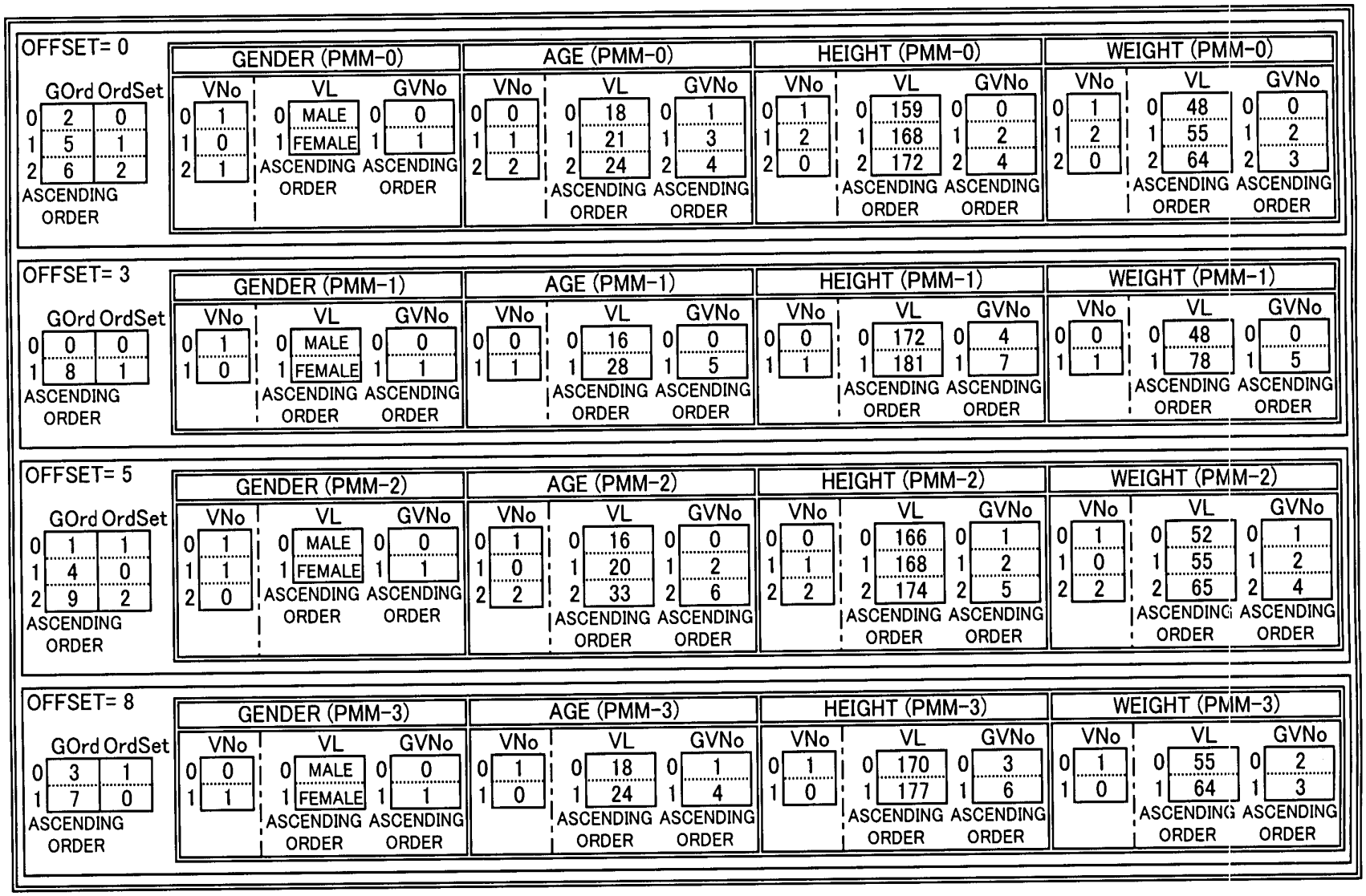

DISAPPEARANCE (ASCENDING ORDER)
[(0,6), (1,9), (2,5), (4,8), (6,7)]
PMM-0
GOrd''
GVNo'
GOrd'
OrdSet'
ASCENDING ORDER
ASCENDING ORDER 2
[(0,6)]
1->2
2->5
3->6
[(1,9), (2,5)]
[(4,8), (6,7)]
(ASCENDING ORDER)
[(0,6), (1,9), (2,5), (4,8), (6,7)]
PMM-1
[(0,6), (1,9), (2,5), (4,8)]
0->0
4->8
[(6,7)]
PMM-2
[(0,3)]
0->1
2->4
4->9
[(1,0)]
[(3,1), (4,2), (5,4)]
[(0,3), (1,0), (3,1), (4,2), (5,4)]
(ASCENDING ORDER)
PMM-3
[(0,3), (1,0)]
1->3
3->7
[(3,1), (4,2)]
[(5,4)]
[(0,3), (1,0), (3,1), (4,2), (5,4)]
DISAPPEARANCE (ASCENDING ORDER)

FIG.56



10/553445

FIG.57

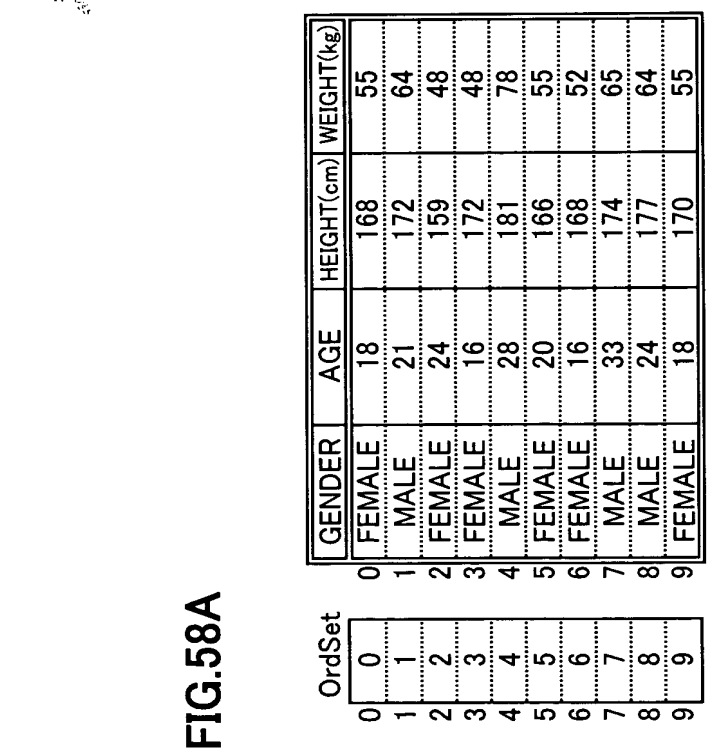
	GENDER	AGE	HEIGHT	WEIGHT
0	FEMALE	18	168	55
1	MALE	21	172	64
2	FEMALE	24	159	48
3	FEMALE	16	172	48
4	MALE	28	181	78
5	FEMALE	20	166	55
6	FEMALE	16	168	52
7	MALE	33	174	65
8	MALE	24	177	64
9	FEMALE	18	170	55

BEFORE SORT

		GENDER	AGE	HEIGHT	WEIGHT
0	3	FEMALE	16	172	48
1	6	FEMALE	16	168	52
2	0	FEMALE	18	168	55
3	9	FEMALE	18	170	55
4	5	FEMALE	20	166	55
5	1	MALE	21	172	64
6	2	FEMALE	24	159	48
7	8	MALE	24	177	64
8	4	MALE	28	181	78
9	7	MALE	33	174	65

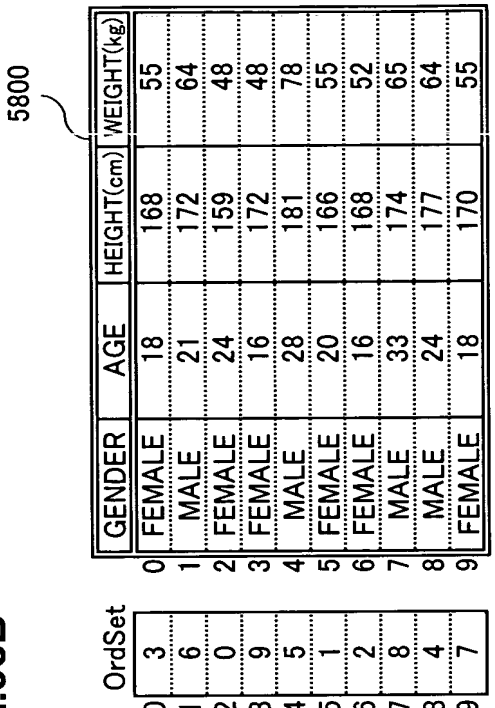
AFTER SORT

FIG.58A



OrdSet	GENDER	AGE	HEIGHT(cm)	WEIGHT(kg)
0	FEMALE	18	168	55
1	MALE	21	172	64
2	FEMALE	24	159	48
3	FEMALE	16	172	48
4	MALE	28	181	78
5	FEMALE	20	166	55
6	FEMALE	16	168	52
7	MALE	33	174	65
8	MALE	24	177	64
9	FEMALE	18	170	55

FIG.58B



OrdSet
3
6
0
9
5
1
2
8
4
7

GENDER	AGE	HEIGHT(cm)	WEIGHT(kg)
FEMALE	18	168	55
MALE	21	172	64
FEMALE	24	159	48
FEMALE	16	172	48
MALE	28	181	78
FEMALE	20	166	55
FEMALE	16	168	52
MALE	33	174	65
MALE	24	177	64
FEMALE	18	170	55

5800

FIG.59

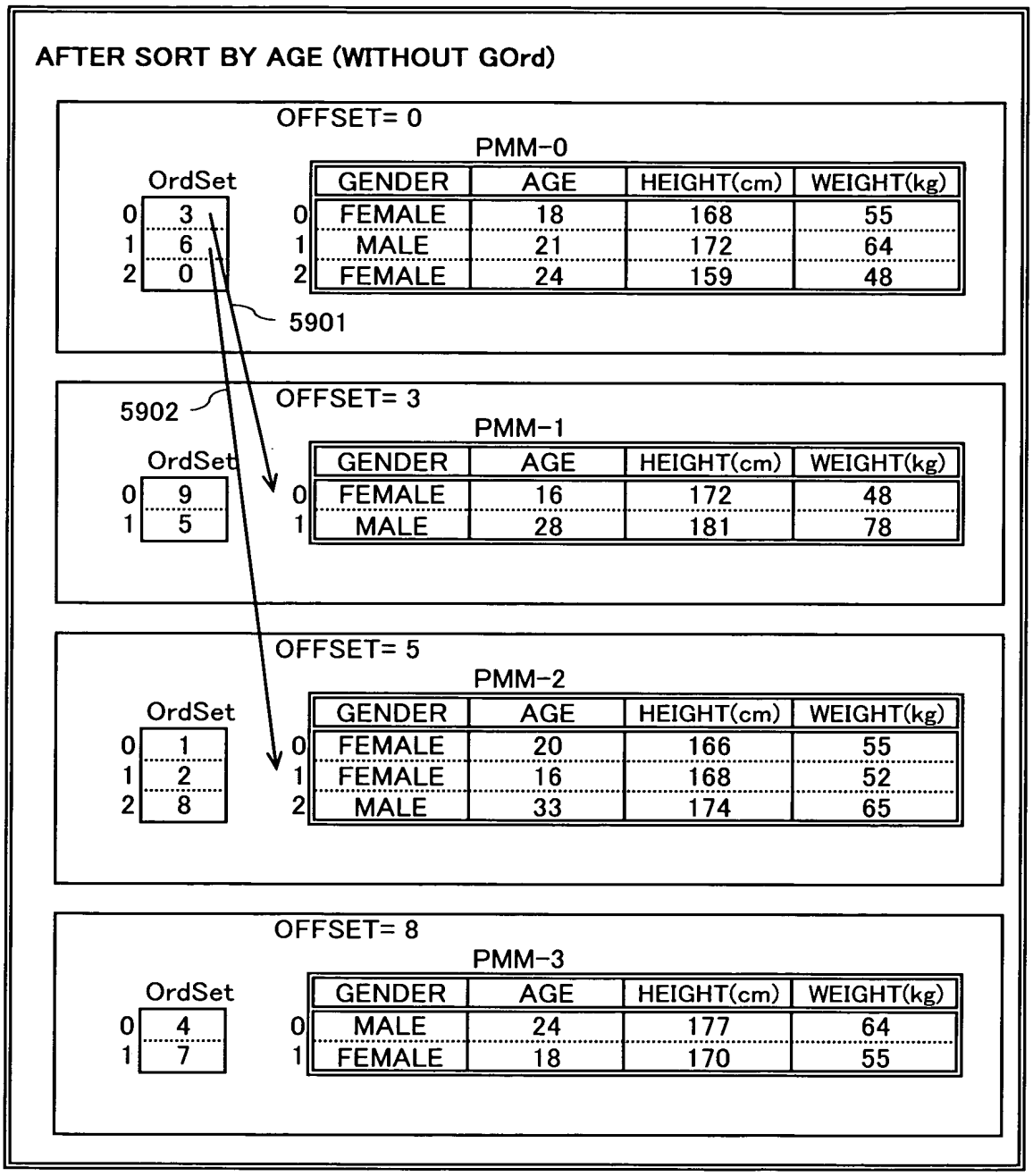

AFTER SORT BY AGE (WITHOUT GOrd)
OFFSET= 0
PMM-0
OrdSet
0 3
1 6
2 0
0 FEMALE 18 168 55
1 MALE 21 172 64
2 FEMALE 24 159 48
5901
5902
OFFSET= 3
PMM-1
OrdSet
0 9
1 5
0 FEMALE 16 172 48
1 MALE 28 181 78
OFFSET= 5
PMM-2
OrdSet
0 1
1 2
2 8
0 FEMALE 20 166 55
1 FEMALE 16 168 52
2 MALE 33 174 65
OFFSET= 8
PMM-3
OrdSet
0 4
1 7
0 MALE 24 177 64
1 FEMALE 18 170 55
GENDER AGE HEIGHT(cm) WEIGHT(kg)

FIG.60

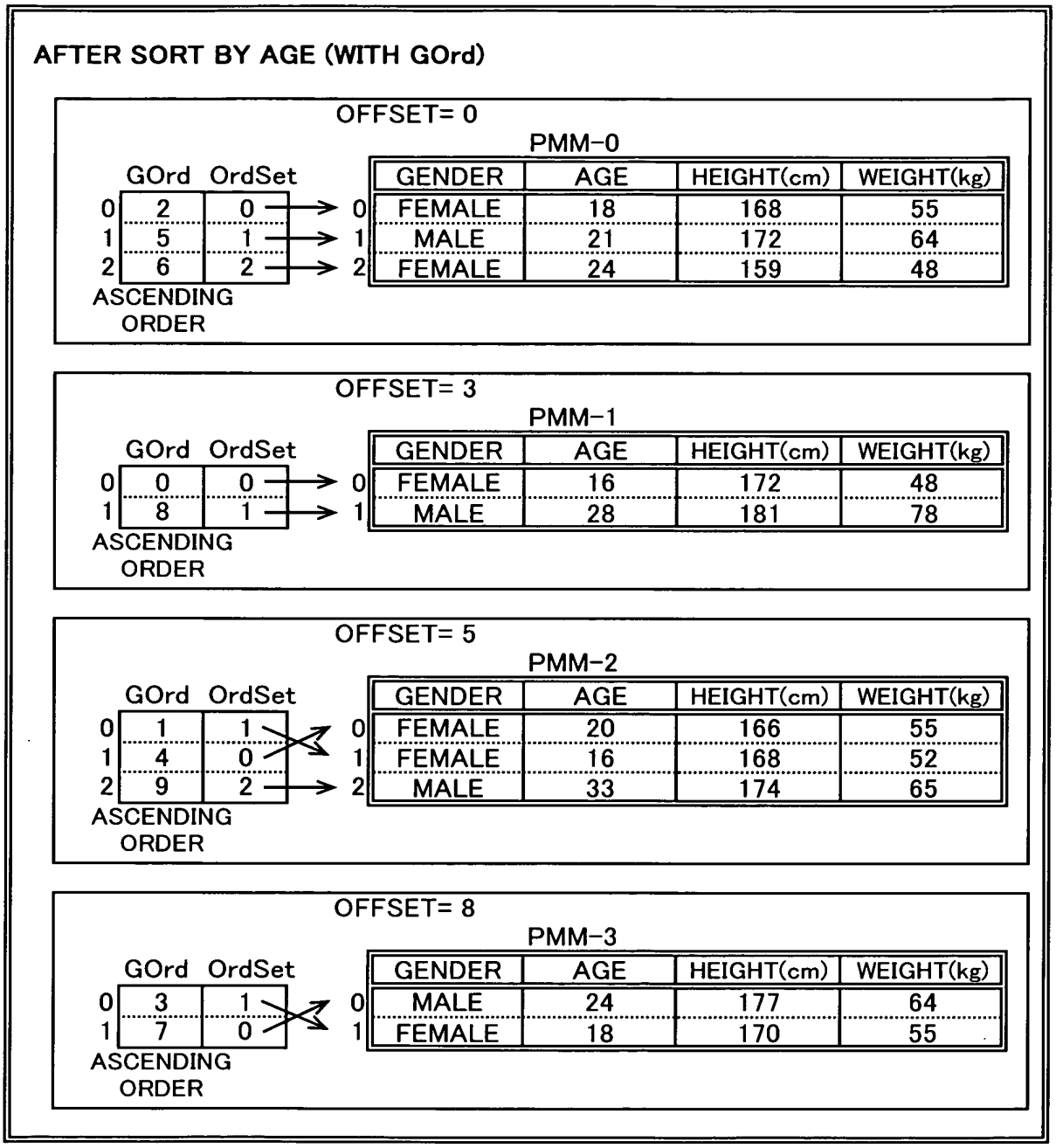
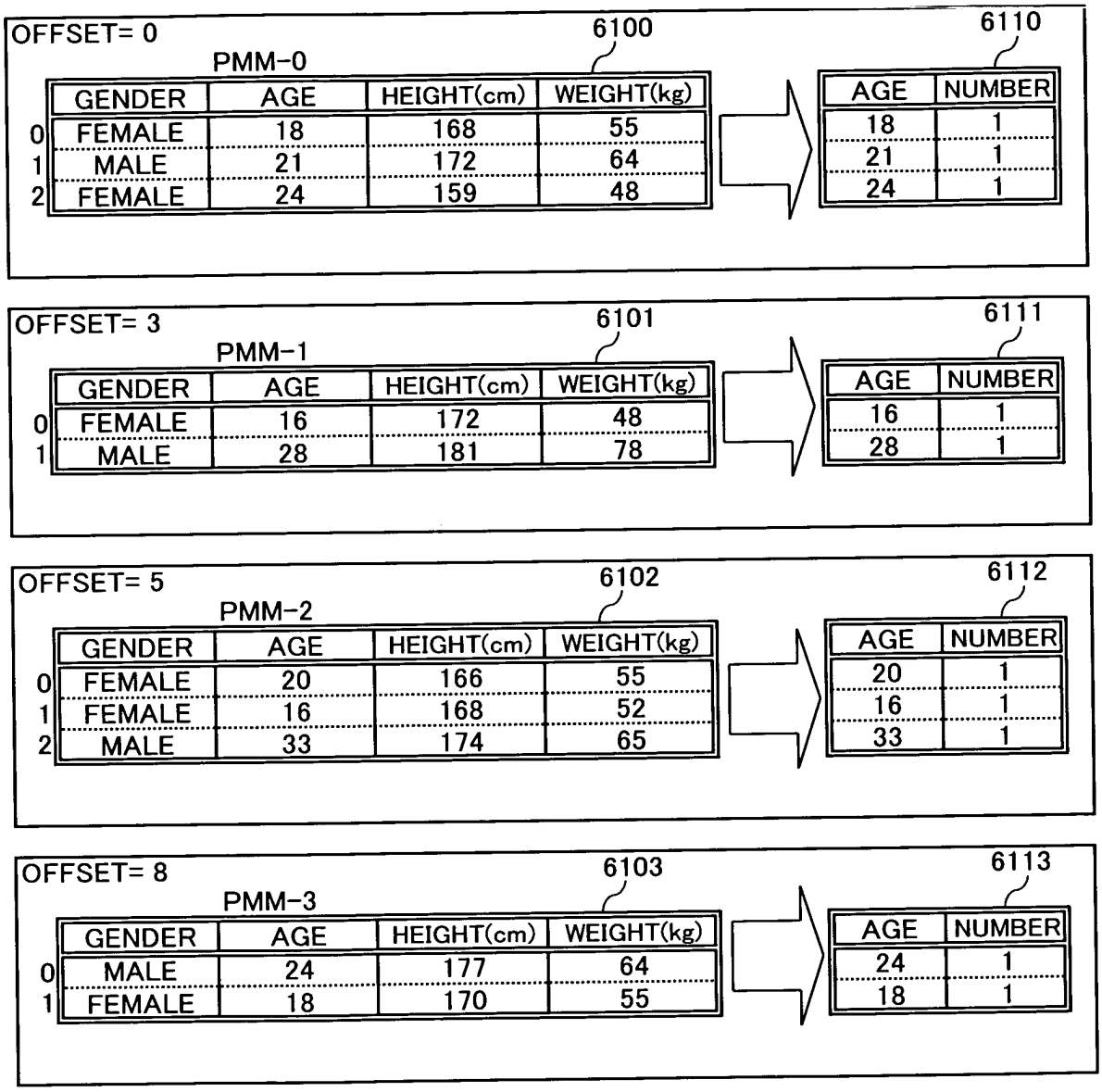

AFTER SORT BY AGE (WITH GOrd)
OFFSET= 0
PMM-0
GOrd OrdSet
0 2 0
1 5 1
2 6 2
ASCENDING ORDER
GENDER AGE HEIGHT(cm) WEIGHT(kg)
0 FEMALE 18 168 55
1 MALE 21 172 64
2 FEMALE 24 159 48
OFFSET= 3
PMM-1
GOrd OrdSet
0 0 0
1 8 1
ASCENDING ORDER
GENDER AGE HEIGHT(cm) WEIGHT(kg)
0 FEMALE 16 172 48
1 MALE 28 181 78
OFFSET= 5
PMM-2
GOrd OrdSet
0 1 1
1 4 0
2 9 2
ASCENDING ORDER
GENDER AGE HEIGHT(cm) WEIGHT(kg)
0 FEMALE 20 166 55
1 FEMALE 16 168 52
2 MALE 33 174 65
OFFSET= 8
PMM-3
GOrd OrdSet
0 3 1
1 7 0
ASCENDING ORDER
GENDER AGE HEIGHT(cm) WEIGHT(kg)
0 MALE 24 177 64
1 FEMALE 18 170 55

FIG.61



PMM-0 (6100)

	GENDER	AGE	HEIGHT(cm)	WEIGHT(kg)
0	FEMALE	18	168	55
1	MALE	21	172	64
2	FEMALE	24	159	48

AGE	NUMBER
18	1
21	1
24	1

PMM-1 (6101)

	GENDER	AGE	HEIGHT(cm)	WEIGHT(kg)
0	FEMALE	16	172	48
1	MALE	28	181	78

AGE	NUMBER
16	1
28	1

PMM-2 (6102)

	GENDER	AGE	HEIGHT(cm)	WEIGHT(kg)
0	FEMALE	20	166	55
1	FEMALE	16	168	52
2	MALE	33	174	65

AGE	NUMBER
20	1
16	1
33	1

PMM-3 (6103)

	GENDER	AGE	HEIGHT(cm)	WEIGHT(kg)
0	MALE	24	177	64
1	FEMALE	18	170	55

AGE	NUMBER
24	1
18	1